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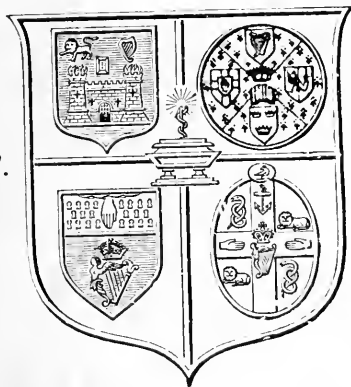
IN

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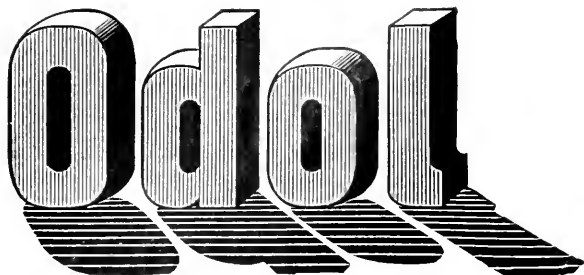
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8. Hand-book of Physiology. By W. D. Halliburton, M.D., F.R.S.; Professor of Physiology, King's College, London. Fifth Edition. London: John Murray. 1903. Svo. Pp. xxiv. + 912.
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12. A Text-book of Legal Medicine and Toxicology. Edited by Frederick Peterson, M.D., and Walter S. Haines, M.D. Volume I. Philadelphia and London: W. B. Saunders & Co. 1903. Svo. Pp. 730.
13. Nothnagel's Encyclopedia of Practical Medicine. Diseases of the Stomach. By Franz Riegel. Edited, with additions, by Charles G. Stockton, M.D., Buffalo. Philadelphia, London, and New York: W. B. Saunders & Co. 1903. Svo. Pp. 835.
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15. Die Gallensteinkrankheit. Von Dr. Walther Nic. Clemm. Darmstadt, Berlin, S.O. 26: Georg Klemm. 1903. Pp. 90.
16. Diseases of the Heart and Arterial System. By Robert H. Babcock, A.M., M.D. New York and London: D. Appleton & Co. 1903. Svo. Pp. xxi. + 853.
17. Manual of Medicine. By Thomas Kirkpatrick Monro, M.A., M.D. London: Baillière, Tindall & Cox. 1903. Svo. Pp. xx. + 901.
18. Protozoa and Disease. By J. Jackson Clarke, M.B., Lond. Part I. London: Baillière, Tindall & Cox. 1903. Svo. Pp. xix. + 177.
19. Encyclopædia Medica. Vol. XIII. Ulceration to Zine Poisoning. Edinburgh: William Green & Sons. 1903. Svo. Pp. vi. + 584.
20. Eye Symptoms as Aids in Diagnosis. By Edward Magennis, M.D., D.P.H. Bristol: John Wright & Co. 1903. Pp. 108.
21. The Physiological Nursery Chart. Designed by Eric Pritchard, M.A., M.D. (Oxon.); M.R.C.P., Lond. London: Henry Kimpton. 1903.

22. Thiolum liquidum bei Pocken. Von Dr. J. S. Kolbassenko. Reprint. 1903. Pp. 4.
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26. Studies from Institute for Medical Research, Federated Malay Straits. Vol. II. No. 1. London: J. & A. Churchill. 1902. 8vo. Pp. 93.
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28. St. Thomas's Hospital Reports. New Series. Vol. XXX. London: J. & A. Churchill. 1903. 8vo. Pp. xvi. + 404.
29. Medical Microscopy. By T. E. Oertel, M.D. London: Rebman. 1903. 8vo. Pp. 362.
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37. Burdett's Hospitals and Charities. 1903. By Sir Henry Burdett, K.C.B. London: The Scientific Press. 1903. 8vo. Pp. viii. + 1119.
38. Mémoires couronnés et autres Mémoires publiés par l'Académie royale de Médecine de Belgique. Tome XVIII. Premier et deuxième Fascicules. Bruxelles: F. Hayez. 1903. 8vo. Pp. 100.

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3. Pacific Medical Journal. Vol. XLVI. Nos. 3, 4, 5. March, April, May, 1903. San Francisco.
4. The St. Louis Medical and Surgical Journal. April, May, June, 1903. St. Louis, Mo.
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7. Comptes rendus de la Société d'Obstétrique, de Gynécologie, et de Pédiatrie de Paris. Tome V. Janvier, Février, Mars, Avril, 1903. Paris: G. Steinheil.
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10. The Medical Brief. April, May, June, 1903. St. Louis, Mo.

11. International Medical Magazine. Vol. XII. Nos. 3, 4. March, April, May, 1903. New York: E. B. Treat & Co.
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13. The Medical Temperance Review. Vol. VI. Nos. 4, 5, 6. April, May, June, 1903. London.
14. The Quarterly Medical Journal. Vol. XI. Part III. May, 1903. Sheffield: Pawson & Brailsford.
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17. Blätter für klinische Hydrotherapie. Wien. XIII. Jahrgang. Nr. 2, 3, 4, 5. 1903.
18. The Journal of Balneology and Climatology. Vol. 7. Part 2. London: John Bale, Sons & Danielsson. April, 1903.
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21. The Charlotte Medical Journal. Vol. XXII. No. 5. Charlotte, N. C. May, 1903.
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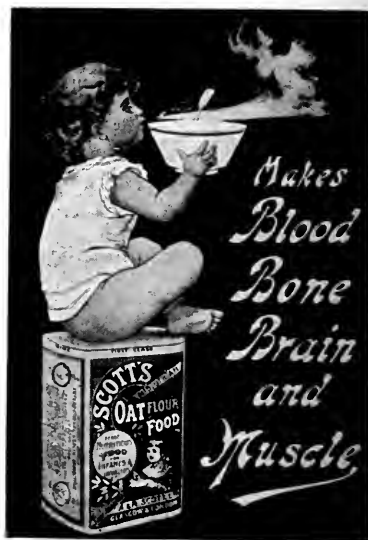
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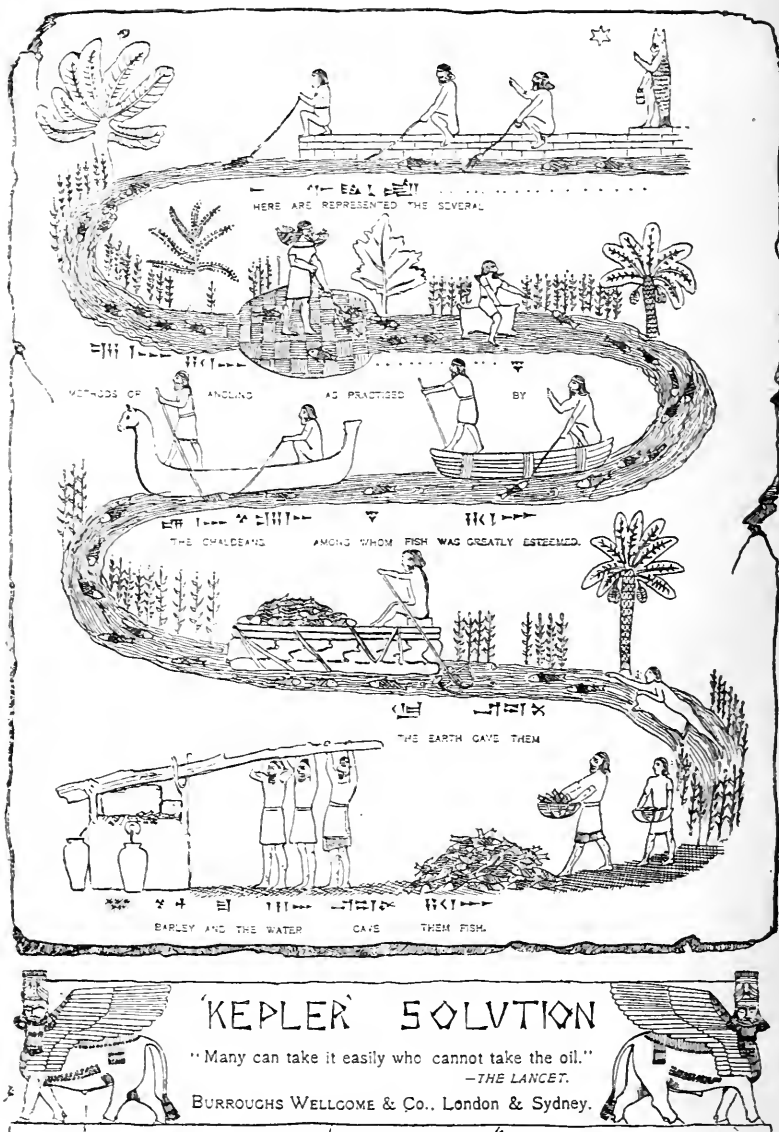
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E. STEDMAN,

Major-General, Military Secretary.



THE DUBLIN JOURNAL

OF

MEDICAL SCIENCE.

JULY 1, 1903.

PART I.

ORIGINAL COMMUNICATIONS.

ART. I.—*Two Cases of Lymphatism.*^a By GEORGE PEACOCKE, M.D., Univ. Dubl.; F.R.C.P.I.; Assistant Physician, Adelaide Hospital, Dublin.

IN the year 1901 I brought under the notice of this Section of the Academy a series of five cases of sudden death in young children. The *post-mortem* in each case showed a condition of hyperplasia of the lymphoid structures, especially the thymus, agminated and solitary follicles of the small intestines, and the mesenteric glands.

Two other cases have recently come under my notice, and I thought it would be of interest to give a very brief account of them :—

CASE I.—On Sunday morning, February 22nd, 1903, a child aged seven months was brought to the Adelaide Hospital by his mother. She stated that a few minutes previously he was eating a crust of bread, when he got what she described as a "choking fit." She immediately carried him over to the hospital, but on arrival life was found to be extinct. He had previously been an apparently healthy child, was well nourished, and had all the appearance of being well cared for.

^a Read before the Section of Medicine of the Royal Academy of Medicine in Ireland, on Friday, May 22, 1903.

The same afternoon I made a *post-mortem* examination. The brain was healthy. There was no evidence of any laryngeal obstruction. The heart and lungs were normal. The thymus, which almost completely covered the heart, measured in its greatest length 102 mm., and in its greatest breadth 63 mm.; its volume was 37 cubic centimetres. The spleen was not enlarged, but on section the Malpighian corpuscles stood out as prominent white elevations. The mesenteric glands were universally enlarged and hard. The agminated and solitary follicles of the small intestine were distinctly hypertrophied, especially the former, giving the appearance usually found in the early stage of enteric fever. No other glands were enlarged, and all the remaining organs seemed healthy.

CASE II.—The second case was that of a boy aged one year and ten months, who was brought to the hospital on the morning of April 4th, 1903. His mother stated that he had had a slight cold for the past few days, but was otherwise a strong, healthy boy. She was leaving the house where she lived in Peter's-row to make some purchases, when she was called back, and found the child "looked queer." She carried him over to the hospital without delay, but on arrival there he was dead.

The same afternoon I made a *post-mortem*. The child seemed well nourished. There was slight evidence of rickets, consisting of some enlargement of the wrists and curving of the lower ends of the tibiae. The thymus was enlarged, measuring in its greatest length 100 mm., and its greatest breadth 70 mm.; its volume was 35 cubic centimetres. The spleen showed the same appearance as in the previous case. The mesenteric glands were enlarged, but there was no evidence of enlargement of any other lymphatic glands. Peyer's patches and the solitary follicles in the small intestines were also swollen, the hypertrophy of the latter being more marked than in the previous case. The other organs were healthy.

In Vierordt's Anatomical Tables, quoting from Friedleben, the dimensions of the normal thymus are given. Its greatest length from birth to nine months, 59 mm.; nine months to two years, 69 mm.; three years to fourteen years, 84 mm. Its breadth from 27 to 41 mm.; and, according to Krause, the length varies from 54 to 83 mm. The volume varies between four and twenty-three cubic centimetres.

In the cases I have described the thymus was, therefore, nearly double its normal size.

In the Report of St. Bartholomew's Hospital for 1902, Dr. Thursfield describes four cases of "sudden death in infants, associated with enlargement of the thymus gland," and thus summarises the points in common in the four cases:—"The sudden death, the absence of any lesion sufficient to account for death, the presence of bulky and heavy thymus glands, and the evidence of hypertrophy of the lymphatic tissue shown in the enlargement of the Peyer's patches and the solitary follicles, and in two cases of the lymphatic glands."

Dr. Laqueur in *La Tribune Médicale* narrates the case of a boy who, after inhaling about 30 drops of chloroform, suddenly died. Chemical examination showed the chloroform was pure. Necropsy showed hypertrophy of the thymus and of follicles at the base of the tongue and enlarged spleen.

Kemdrat has collected twelve similar cases, in all of which there was evidence of hypertrophy of lymphoid structures.

The cause of death in these cases seems quite obscure. There is no evidence to prove that it is due either to direct pressure on the trachea, or to pressure on the vagi in the neck by an enlarged thymus, as has been suggested. Pathological investigation has failed to corroborate the statements that it is due to coagulation of the blood, the result of thymus secretion, or that its cause can be attributed to the presence of certain toxins in the circulation.

The association of hypertrophied lymphoid structures and sudden death in young children is now an established fact, but further investigation is needed to discover the relation that exists between them.

ART. II.—*The late Cholera Epidemic in Egypt.*^a By GEORGE
FREDERICK ALEXANDER SMYTHE, Lt.-Col., R.A.M.C., L.R.C.P.
Edin., L.R.C.S.I., D.P.H., F.R.C.S. Edin., F.R.G.S.

‘CHOLERA, that great scourge of the East, may be looked upon as a comparatively modern disease, no authenticated record of it being in existence a century ago, and the people of India, “amongst whom it is now endemic,” hold the tradition that it appeared together with the English in Hindoostan and will disappear on their departure from the country.

Many places in Southern and Central Asia have been settled upon as the birthplace of this dreaded disease, but Hurdwar, on the banks of the Ganges, and to which holy pilgrimages take place every year, is, no doubt, one of the greatest sources of its dissemination over the whole Continent of Asia, as I know of no year in which sporadic cases of cholera occurring in remote parts of India have not been traced to pilgrims returning from the holy fair.

During my service I have had the misfortune to have been the witness of four outbreaks of cholera, and each succeeding experience has quite upset the ideas that I had formed on the preceding one. Surprises always seem to be the order of the day, and the enemy invariably attacks from a quarter where least expected or guarded against.

One lesson, however, has been strongly impressed upon my mind, and it is, that as a rule it is by no means a water-borne disease. That the micro-organism is frequently conveyed to man by water in which it has found a convenient vehicle and place of multiplication is without doubt, but in my mind this is more accidental than the rule. Man himself would appear to be the prime offender, the one great source, not only of its cultivation, but also of its dissemination abroad and the means by which it is conveyed to distant places, remote from all chance of water contamination, but generally following the course of travel and roads traced by trade caravans.

I will not dip into ancient history by going into those stale accounts of the various epidemics that have occurred from year to year in India, but will endeavour to trace for your

^a Personal notes taken of the late Cholera Epidemic in Egypt, and read before the Biological Club, Dublin.

information the more recent one that has just ended in Egypt, as it has opened up fresh points and given much food for serious reasoning over some of our former theories. Many points have been made clear, and others brought more definitely to the front, that will require to be thoroughly gone into and explained after careful research in the future. It is no time during the prevalence of an epidemic to make and proclaim theories that in cooler moments are easily proved to be fallacious, but rather to collect data and information that will assist and guide scientists, who in the cooler and less exciting retreats of their studies and laboratories can build up and prove theories founded upon the carefully tabulated experience of those who labour in the field of medical research.

During the last Mohammedan pilgrimage to the Shrine at Mecca, cholera manifested itself in a most virulent form, thousands of the pilgrims from all parts of the East perished, and the greatest fear was felt by the authorities of all Mohammedan States that on the return of the survivors the scourge would be introduced and spread amongst their dominions, and precautions were taken accordingly.

Egypt was by no means backward in this respect, and the Director-General of the International Quarantine Board, Dr. A. Ruffer, made every preparation that a scientific knowledge of the situation could deem necessary.

For the quarantine station for Egypt, was specially prepared, a larger number of huts erected, and attendants provided for, as well as greater supervision by the police authorities. Every pilgrim was landed at that station, and had to remain there for ten days or such further time as might be deemed necessary by the quarantine authorities before he was permitted to return to his home, and no native returning from the Holy City was allowed to enter Egypt through any other portal. By these means many cases were detected and treated in the Lazaretto Hospital, and all were disinfected as well as their clothing before being finally sent to their homes. The station was closed, the officials scattered to their various duties, and many proceeded on their annual leave. A sigh of relief went throughout the official world, and found vent in the Press; people congratulated each other that the great

danger was over, and that they could leave their homes and businesses in peace and security to seek their annual rest in Europe.

On the 24th of July I received a wire to return at once to Egypt as cholera had broken out, and on arrival heard that it had made its appearance at a small town called Mousha, not far from Assiout, at a distance from the river, off of the line of rail, and not on any regular trade route. The first case was reported on the 20th of June, over a month having passed since the closing of the camp at Tor, and the last pilgrim party declared free of all contamination and fit to proceed to his home.

It was not long before it manifested its appearance in Cairo, introduced by refugees from up country, and soon had penetrated every quarter of the town, and though people died at the rate of from 100 to 150 a day, in no case was there the slightest chance of the water supply having been contaminated. The vehicle by which the micro-organism was carried from place to place was, without doubt, man and his clothing.

In Alexandria we were continually having isolated cases, but these were invariably introduced from without, and generally came from Cairo. Every precaution was taken that was possible. The water supply was guarded by a line of police, fifty yards apart, with barbed wire between. No boats were permitted on the Mahmoudieh Canal, from which the water was drawn. Instructions were given to the various communities by their Consulates as to the best domestic precautions, such as sterilising all food, &c., and then we waited for what we knew must come, and those whose business permitted of it left with their families for Europe.

The first case that transpired amongst the actual inhabitants of Alexandria was that of the cook of the Greek Patriarch. A friend of his had come down from Cairo to see him, and spent the afternoon in his company. On the following day he did not feel well and went to the Greek Hospital, where it was discovered that he was suffering from a well-marked attack of cholera. He recovered, but two other servants in the same house died. I made very careful inquiries into this case, and found that every article of food or drink consumed in the house was carefully sterilised by

boiling before coming into the kitchen ; it was therefore clear that that was not the source of contagion. The cook's friend did not develop any symptoms of cholera, but came from an infected district.

A couple of evenings after this I was asked to see, in consultation, an old Greek lady, aged seventy-two, who resided in the best European quarter of the town. I found that the day previous she had received a basket of mangoes from Cairo, and, having opened the package, she gave them to her maid to have them sterilised. They were taken into the kitchen and plunged into boiling water by the cook, and afterwards were eaten by various members of the family, but not by the lady in question. She, the maid, and the cook all contracted cholera, but those members of the family who ate the fruit felt no ill consequences. On tracing this basket of fruit I found that it had been gathered in a garden where there had been several cases of cholera. The fruit here was manifestly the carrier, as those who handled it before sterilisation contracted the disease, while those who ate it afterwards escaped.

The epidemic soon became prevalent throughout the town, but showed a marked preference for the European quarters of the suburbs, and large numbers of every nationality died, the greatest number being in that part occupied by the English colony, who suffered heavily.

The troops, however, who were quartered in barracks scattered throughout the whole of the most contaminated parts of the town, were peculiarly immune, not a case transpiring among them. This freedom I attribute to the three great precautions that were taken—viz., 1st, they were confined to their barracks, and no communion was allowed with those outside ; 2nd, all food and drink was sterilised before being allowed within the lines ; and 3rd, all those officers and men who by their duties had to go into the town, on their return were compelled to wash their hands before re-entering the barracks in a strong solution of mercuric chloride. In only two instances were there any cases of cholera amongst them, and both of these were in the families of married officers who lived outside of barracks in the English suburb of Ramleh, and therefore out of military control. As they are both typical of the way this disease is spread I will state them

briefly, since they are among the many that explain the method by which the poison is carried from person to person.

The first case was that of the son of Captain A. In this family, like all other European households, every precaution was taken about water, food, and contact with natives, but one morning the little boy was permitted to go for a drive with his governess and native groom, and, childlike, insisted upon taking the reins and driving himself. Two days afterwards he was seized with an attack of cholera and died. On inquiry I found that the groom or syce, who had come into contact with the child, lived in a house from which a cholera patient had been taken to the isolation hospital three days previous. The syce or groom did not contract the disease.

The second case was that of Captain C., in whose house all the usual precautions were taken. He came into barracks at 10 a.m. in his usual health; at 11 a.m., not feeling well, he went into a brother officer's room and lay down; at 11 45 I received a telephone message, and sent the orderly officer to see him, following myself at 1 15, when I found that he was already in a cyanosed condition and pulseless, and responded to no treatment, dying comatose at 3 p.m.—4 hours from hour of attack. On careful inquiry I found that his cook lived in a house in which a man had died from cholera. The cook himself did not contract the disease.

After this date the epidemic gradually subsided until about the 12th of October, when there was a recrudescence caused by the arrival in the market of the fresh dates from the cholera contaminated gardens of Rosetta: this sent up the number of cases at once, but the energy of the sanitary department soon got them under, and they gradually declined until they ceased altogether, about the end of November.

Having stated the foregoing facts, we may now examine them and reason as to their cause.

First.—How was it that cholera broke out at Mousha, a town of no importance, far removed from the caravan routes and usual roads of intercourse, instead of at the seaports, where it naturally might be expected?

Secondly.—How was it carried throughout the length and breadth of the land, when it must be clearly understood that the water supply was uncontaminated beyond doubt?

Thirdly.—Why was it that on its being conveyed to Egypt by the returning pilgrims from Mecca it did not visit Turkey, Tripoli, Tunis, Morocco, and other places to which pilgrims returned, and which took fewer precautions and were devoid of any idea of sanitary measures of the most primitive description?

Fourthly.—Why was it that Europeans living under the best of sanitary conditions suffered proportionately to a greater degree than natives, who live under a condition of things too primitive for words to duly express?

Fifthly.—Why was it that the mortality (97 per cent.) was so enormous after all these years of careful research and humanitarian treatment of the sick?

In answer to the first query, perhaps it will not be out of place to quote a statement made by one of the most eminent and experienced bacteriologists of the day. In the course of an interesting conversation, during the height of the epidemic, he stated that he had come across, while at Tor, a man who three months after the possibility of infection had an attack of diarrhoea, from which the micro-organisms or Koch's spirillum of cholera had been isolated and freely cultivated. It is, therefore, altogether possible and even probable that a similar instance occurred at Mousha, and that some one man, who had successfully passed through the ordeal at Tor, proceeded to his home with the spirilla dormant in his enteric system, and that it did not develop its full force until some considerable time after his arrival. In no other way can this strange outbreak be accounted for, as every precaution was taken as to disinfection of clothing, &c., and it was quite impossible for any returning pilgrim to enter Egypt without first passing through the observation station and remaining under control for ten days. And when it is further considered that, after having been carefully preserved in a damp, moist atmosphere for over a twelvemonth, earth in which cholera excreta had been mixed gave cultivations of the "cholera spirillum" in the most active form, it cannot be looked upon as a very far-fetched theory if a similar origin as to the cause of the late outbreak be suggested.

In answer to the second question—as to the mode of transit from place to place—I have not the slightest hesitation in

stating that it is man himself, and from the cases that are now laid before you, which have been gathered from amongst hundreds of similar ones, it is clear that a person may be the carrier, although free of the disease himself. In the East it is usual for a person to cleanse himself by means of his hand and a little water or sand after the act of defæcation. Can it then be wondered at if the hand which has been used for such a purpose by a patient suffering from the earlier stages of cholera should become the principal means of its propagation, contaminating as he must everything that he touches? That water is sometimes contaminated I consider to be more accidental than the rule. The micro-organisms increase and multiply freely under such circumstances, but would appear to soon spend their force and rapidly become attenuated and disappear. Damp, warm earth, shaded from the rays of the sun, would seem to be the place of all others most suited to their preservation.

In answer to the third question I can say nothing. Pilgrims returned to all parts of the Mohammedan world infected with cholera. In most of these countries there is no word in the language that expresses the idea of sanitation or cleanliness. The precautions taken against the advent of the scourge were half-hearted, the race being so fatalistic and the officials utterly corrupt. Yet they were free; and Egypt, under British control, was singled out as the one place for attack. It is a mystery that I trust will soon be explained by the searching inquiries that are being conducted by the quarantine authorities. That the Europeans, living under the most approved rules, should have proportionately suffered more severely than the natives I attribute to the fact that at an early date the markets where vegetables were sold became infected, and although many representations were made to the authorities, they neglected to either close or control them. They were thus the means of spreading the disease amongst those households whose native cooks frequented them.

In answer to the fifth and last—as to why the mortality stood at the enormous percentage of 97—it must be explained that it was only those cases who died in hospital or recovered in hospital, added to those who were found dead in their

houses or the streets, that were returned at all. Those who were treated and recovered in their homes were not usually reported, since all Easterns, and Mohammedans especially, have a profound dislike to the privacy of their domestic life being broken into by the authorities, especially sanitary ones, and any practitioner reporting a case would most certainly not be called in again.

From this most interesting epidemic we should look for much information in the near future; far more than we have been able to collect in the past, when facts have been obscured and almost obliterated by the obstinate deception of the native, whose mind is so imbued by the idea that to divulge the truth will do him some harm that it is almost impossible to extract reliable statements from him. This time, however, the epidemic spread more amongst the Europeans and educated natives who have been only too willing to give every information in their power, and for once in the history of the world the European consular authorities united to assist and not to thwart the English in their efforts. This was unparalleled in the history of Egypt, where even in our attempts to stamp out disease and control immorality we are only too frequently hampered by the representatives of the European powers, for political reasons.

Having thus briefly traced the course of this, the latest, epidemic, and one dangerously near to the shores of Europe, perhaps it will not be out of place if before closing we briefly examine into its most successful lines of treatment.

I have tried most of the systems which have been advocated, and have found them all most unsatisfactory and unreliable. The disease is too sudden in its onset and short in its course to allow of any medical treatment being effective. In the Italian army the early administration of calomel is strongly recommended and has much to be said in its favour, provided that you could give it to the patient the day before he developed the attack, for there is little chance of its doing any good afterwards, as owing to the extreme irritability of the stomach it is expelled as soon as swallowed. The French are in great favour of trying to control the diarrhoea by means of strong acid astringents, which I have found equally futile. No drugs administered by the mouth can be depended upon, as they are

expelled as soon as taken in the first or stage of onset, and lie unabsorbed in the stomach in the second or stage of collapse. But I can speak highly of a symptomatic course of treatment if carried out by means of hypodermic injections. Of these I have found morphin, in the first stage, of the greatest benefit, easing the cramps and lessening the irritability of the stomach. In the second, or stage of collapse, strychnin and saline injections into the tissues under the arm or over the abdomen, until reaction sets in; but, unfortunately, as soon as this takes place the vomiting and diarrhœa again set in, and a relapse is the result. These remedies should be administered with the hand on the pulse and a halt cried as soon as the heart responds. A step beyond this is almost certain to produce a profuse discharge from the bowel and a return to the stage of collapse. In former days it was not recognised that during this stage the stomach ceased to perform its functions of absorption, and that drugs administered by the mouth simply lay there inactive, and frequently accumulating, due to the ignorance of the medical attendant, until reaction set in, when the stomach, resuming its functions, found itself loaded with large amounts of, perhaps, dangerous compounds, with the result easily imagined.

In the third, or reactionary, stage danger is practically over, and it is then a case for careful nursing, conducted on the lines of that for enteric fever.

If taken in hand energetically at once upon its appearance I do not think that it is at all difficult to control and suppress an outbreak; but, unfortunately, English officials are so afraid of interfering with the liberty of the subject that they generally allow it to gather such force before exerting themselves that in the end they lose thousands where hundreds alone would have been victims if they had used at first the strong repressive measures to which they are generally compelled to resort in the end.

It is difficult in all epidemics to gain the permission of the relatives for the body to be examined after death, but this is most so in a Mohammedan country, where it is looked upon as sacrilege, and at once becomes a burning religious question, that frequently leads to riots and loss of life if insisted upon. But if after death we make an autopsy, we will find all the

signs of a state of great gastro-enteric irritation. The stomach is congested and inflamed in patches, and has somewhat the appearance of that caused by irritant poisoning, and is either empty or contains a little fluid, the result of the fruitless though well-meant efforts to treat the malady by drugs through the mouth. The small intestines are congested and inflamed, empty and collapsed. The large intestine is in a similar condition, and occasionally gangrenous. All the other organs are more or less congested and disorganised, but especially so the kidneys, which are frequently of a deep maroon colour, but in no case, I believe, has it been possible to detect the micro-organism in these tissues, it being found in the enteric tract alone. There is one sign, however, that is not seen in any other disease, and that is the peculiar black, tarry condition of the blood in the veins, due to the draining away of all its watery material, leaving it thick and sticky like pitch.

In conclusion, I should like to remind you that during the Dongola Expedition, in 1895, cholera broke out amongst the Anglo-Egyptian Army on the right bank of the Nile, and kept pace with it in its advance against the current of the stream. In no case did it attack the natives ten miles in front of our advanced guards, nor did it invade the left bank of the river, which was immune and served as a sanatorium. If the water had been contaminated those on the left bank ought to have suffered as well as those on the right. Again, it should not have spread and advanced against the stream, which flows, as a rule, six or eight miles an hour. Advancing with our advance, and halting with our halts, the poison was clearly being carried along by our own troops, and it was only on this fact being recognised and precautions duly taken that the epidemic was suppressed and the army enabled to advance against the Dervishes

ART. III.—*Notes on a Year's Asylum Work.*^a By W. R. DAWSON, M.D., Univ. Dubl.; F.R.C.P.I.; Medical Superintendent, Farnham House, Finglas, Co. Dublin.

As usual for some years past. I venture to bring forward notes on some of the more interesting points which have arisen in the practice of the year ended on March 31st, 1903.

Causation.—Again dividing the causes of mental disease broadly into the three groups of inherited diathesis, moral and mental wear and tear, and intoxication, the fresh cases of actual insanity admitted during the year may be distributed as follows, the cause assigned being that which appeared to predominate, though not necessarily the only one:—Neuropathic diathesis, 36.36 per cent.; moral and mental wear and tear (including epilepsy), 54.54 per cent.; intoxication, 9 per cent. In the great majority of the cases more than one factor was operative, and distinct neurotic heredity, direct or collateral, was present in nearly 73 per cent. This is lower than in the admissions of the previous year (78 per cent.), but certain cases have not been included, in which nothing more marked than passionate temper, eccentricity, or obvious "nervousness" in the relatives could be ascertained. These cases, taking all circumstances into account, were certainly neuropaths from birth, and therefore, it may be assumed, derived their diathesis from their ancestors, so that they should probably be included. If this be done the percentage rises to 90. As before, moral and mental wear and tear is mainly responsible for more cases than either of the other groups of causes, but the share of intoxication is by no means fairly represented by the small percentage in which it seems to have played the leading rôle. In one form or other it was probably a factor in more than half the cases, not counting a case of morphinism, sane on admission, which has not been included in the above numbers.

Dementia Præcox.—Next to the forms of mental disease which exist from birth or early childhood, imperfection in inherent power of development is most distinctly shown by the group of diseases which Kraepelin brings together under

^a Read before the Section of Medicine of the Royal Academy of Medicine in Ireland, on Friday, May 22, 1903.

the above name—viz., hebephrenia, katatonia, and paranoid insanity. These forms of disease, of which the last is somewhat indeterminate in character, all resemble idiocy and imbecility in being due to developmental arrest, but in them the development has reached a more advanced stage. Furthermore, they are not mere arrests, but are all characterised by a premature involution, a tendency to rapidly supervening dementia, after a comparatively short stage of more acute insanity. A case of *hebephrenia*, of the early part of which an account was given in last year's notes, was re-admitted on May 24th, 1902, having relapsed after a remission of a few weeks. A full study of this case has been published recently,^a but the following is a brief summary of it :—

CASE I.—The patient, a lad aged eighteen, with some neuropathic heredity, was admitted on March 1st, 1902. He had led a solitary, unhealthy life ; had masturbated for some years ; and, shortly before admission, had made a fatuous attempt at suicide, which was the immediate cause of his being sent to an institution. He was very depressed at first, and full of delusions of a hypochondriacal and suspicious character, and was physically run down. Under tonic and outdoor treatment he rapidly improved, both physically and mentally, and was discharged in about six weeks. After a fortnight, however, he began to manifest signs of relapse, and on re-admission he showed the same delusional state of mind as before, but in less acute form, and without much depression. He had glycosuria for a few weeks at this period, but it disappeared under dieting, and has not returned. He was brooding, suspicious, and somewhat depressed ; full of elaborate delusions of influences at work upon him, and, at the same time, occasionally of his power of benefiting mankind if not " imposed upon," as he put it. There were also hallucinations, occasional fits of noise, and once or twice violence ; and, with intervals, he continued to practise self-abuse. Towards the end of his residence here his delusions and hallucinations appeared to be passing off, but there was no marked improvement otherwise, and on the whole he was less intelligent, though in this respect there was some slight improvement before he left. He was removed last January by his father, who wished to try a modified hydropathic treatment. This has done no good, and his prospects are probably hopeless.

^a Journal of Ment. Science, April, 1903. P. 303.

The patient's age, and the course of the illness so far (early depression with a futile suicidal attempt, delusions and hallucinations gradually passing off, a remission, some mental weakness, and the general character of the symptoms), render the case a fairly typical example of the first variety of dementia præcox. The following probably belongs to the second variety, katatonia :—

CASE II.—The patient, a married but childless woman, aged thirty, was admitted early in last June. She had a bad family history, and is said to have been peculiar for a considerable time ; and she had become connected with one of the more emotional religious sects. Over a year before admission she imagined that she was being preached at in church, and shortly afterwards became acutely insane. This passed off almost immediately, but during the summer and autumn of 1901 she was melancholic, and had depressing delusions on religious matters. After a short improvement she somewhat suddenly became violently excited, with grandiose delusions, also of a religious type, and apparently hallucinations. This was followed by a period in which she was perverse, from time to time stuporose, and wet and dirty in her habits, while the elevated delusions continued. In the beginning of 1902 she refused to speak for six weeks. She then became more variable, but on the whole was perverse and obstinate, sometimes wet and dirty, and inclined to expose herself, with delusions of being damned. Except for a day or two at first, she has, since her admission, almost up to the end of March been in a state of resistive stupor, as a general rule lying quietly with her eyes closed, having almost invariably to be tube-fed, and passing under her. She almost always refused to wear night linen, but retained her clothing during the day as a rule. When any attempt was made to move her she would resist violently and viciously, spitting and struggling. In the summer she was submitted to a course of thyroid feeding, but was only partially roused by it, and soon relapsed ; and of the other drugs tried, the only one which produced any marked effect was, curiously enough, trional, given in 10 gr. doses thrice daily. Under this she always roused somewhat, but it soon lost its effect. Towards the end of March, after a period of still deeper stupor resembling coma, the resistiveness seemed to be passing off, and some elevation took its place, and on the 31st she walked downstairs and in the grounds. There have been some other signs of improvement, notably the return of the

menses, which had been in abeyance during the autumn and winter; and the future course of the case is a matter of much interest. It may be added that she seemed, so far as could be judged, to retain her perception of what was going on around her, and on one occasion, when frightened by another patient's screaming, she even got up and left her room, and was more rational for the remainder of that day.

The succession of melancholia, mania, and stupor, the resistive character of the last, the delusions and hallucinations, as well as other features in the course of the case, all point to katatonia; but some further observation is required before the question can be absolutely settled.

Stuporose Melancholia.—It is probable that some writers would include the following case, admitted during the year, in the category of katatonia. It seems, however, to be an excellent example of a form of stupor which is not katatonic, for reasons which will be seen later :—

CASE III.—The patient, a married woman, aged thirty-three, comes of a nervous family, though no neuropathic history has been elicited. She had sustained a severe fall on her head when out riding some 15 years before, and had frequently suffered from headaches since. Just before the present attack she had had an abscess in one of her fingers. She is said to be naturally rather sulky and obstinate, but very nervous; and for about two years has been worrying unnecessarily about a certain action on the part of a relative. Early in 1902 she became parsimonious, and then acquired delusions of having no money (even when she had £7 or £8 in her pocket at the time), and grudged necessary expenses. Next, she thought that the police wished to arrest her for starving her household, and then began to dislike her husband, and to refuse food. On one occasion she is said to have attempted suicide. Various measures, such as change, Weir-Mitchell treatment, &c., were tried without avail, and finally she was sent to Maryville. On admission she was very emaciated, looked much older than her years, and was stuporous and resistive, but no organic disease could be detected. Her physical condition has considerably improved under treatment, but mentally she remains much the same. Her state varies frequently between a quiet stupor, in which she sits or stands motionless and silent (mutism) and often allows her limbs to remain for a short

time in any position in which they are placed (catalepsy), and a state of acute restlessness and resistiveness, in which she looks intensely miserable and is very noisy, repeating one cry for hours in an automatic sort of way (verbigeration). Even in the latter state, however, there is still a great deal of stupor. She has frequently to be tube-fed, is wet and dirty in her habits, and at times wakeful at night. Occasionally she recognises her relatives when they come to visit her, and seems glad to see them, but not always. Various forms of special treatment—thyroid feeding, lavage, morphin or opium hypodermically and by the mouth, and latterly over-feeding—have been tried without much apparent result, at least on the mental side ; but the case is by no means a hopeless one, and improvement may appear at any time.

It will be seen that such a case differs from a typical one of katatonia in the absence of marked heredity, of a maniacal stage and exalted delusions, and of a tendency to remissions, as well as in the existence of marked depression all through. It seems, therefore, more accurate to call this form of disease by the name at the head of this section.

Transition Cases.—Lying somewhere between dementia præcox and paranoia are certain cases of hereditary psychosis, perhaps more commonly seen amongst the educated classes than in public institutions, which are not always technically insane, but always seem to be trembling on the verge of insanity. Such patients may not have actual delusions, but they often betray a delusional attitude of mind, shown by morbid opinions and distorted views of their own condition and of the actions of others. They are always imagining slights, and doubtful of the affection of their relations, or of the fidelity of their husbands or wives, as the case may be ; or again, they may show their mental unsoundness chiefly by ill-judged or immoral conduct, and are then sometimes set down as cases of "moral insanity." They may easily become dangerous to themselves or others, and their prospects are naturally far worse than those of most sufferers from pronounced acute insanity. Two voluntary boarders admitted during the year belong to this class.

CASE IV.—A girl of twenty-six, with very bad heredity, had the following history:—She had led a healthy, open-air life, but

appears to have had a tendency to morbid sentimentalising. She was more than once engaged to be married, and latterly had shown sexual excitement and practised self-abuse. After an attack of what was possibly influenza, she became depressed, broke off an engagement, and began to try to run away from home, sometimes insufficiently clad; and finally she exposed herself on several occasions in a condition of complete nudity. These acts were impulsive, and ordinarily she was to all appearance reasonable enough. She was thin and nervous on admission, seemed in poor general health, and was somewhat depressed, with high blood-pressure. She deplored her loss of modesty and truthfulness, which she said was so much the reverse of her usual character, but during her residence she showed neither the one nor the other. Under tonic treatment she improved much, both mentally and physically, and was discharged, to all appearance well, in about three months. She was not properly looked after nor judiciously treated, subsequently, however; and about two months after her discharge, a successful attempt at suicide terminated her existence.

In this case there was no evident intellectual disturbance at all commensurate with the disorder of conduct, for which no satisfactory reason could be elicited from her. In the following, however, the mental disturbance was considerable:—

CASE V.—A married woman of thirty-one, also with some neuro-pathic heredity, had a history of an attack of puerperal mania about seven years previously. She had always been of a passionate temper, and her past had been such as to imply a degree of moral imbecility. Latterly she and her husband had been living in a lonely district, and her sexual health was very bad. She was always jealous of her husband, but of late became frantically so, alleging misconduct on his part with her governess; and she would give way to ungovernable outbursts of passion, using the vilest language. There were no real grounds for her jealousy, but she twisted and distorted every occurrence to support her belief in her husband's inconstancy; and she had very little reticence, and would readily detail her fancied wrongs, sometimes publicly and passionately, but when quiet in a more or less reasonable manner. She ate and slept very little, and was rapidly losing weight—a fact which appeared to afford her some gratification. She was very hysterical, and had a number of hyperæsthetic areas in various regions, and

she suffered from endometritis, retroflexion, and fissure of the os uteri. She improved somewhat under treatment, but became worse again, and after two months returned home. She was no better there, however, and as a last resource she was, by my advice, submitted to a course of Weir-Mitchell treatment, which seems to have been of benefit, though continued mental well-being is unlikely.

A Case for Diagnosis.—The following case is exceedingly interesting from the point of view of diagnosis :—

CASE VI.—Business man, aged forty-eight, married. Very bad heredity, both direct and collateral. Always quiet, courteous, reserved, religious, and free from vice ; dull, but a good business man. Venereal disease excluded. After a spell of over-work and anxiety he suffered from influenza, and about 15 months before admission he had one or two very transient attacks of excitement, and grew depressed and hypochondriacal, with loss of will-power and self-confidence, and of ability to transact his business, of which latter fact he was aware. This condition lasted with some slight improvement for about a year, and then, when on a visit, he suddenly changed completely, became jovial and fond of practical jokes and of playing the fool. He was full of absurd conceit about his abilities, and talked of being a poet and a composer, of bringing out a play, and of making £100 by publishing a silly article which he had written. His appetite became voracious, and his inclination for sexual intercourse greatly increased. On admission the pupillary reaction to accommodation was found to be sluggish, and in one eye the consensual light reflex was slight. Subsequently commencing optic atrophy was found, most advanced in the left eye, the pupil of which was large ; and there was some photophobia and dimness of vision. (The patient had sustained a blow on this eye about a year before, and sight had been failing for some time.) There was some fibrillary tremor of the tongue, and slow speech, with slight slurring of certain letters at times (this was only at first), but the knee reflexes were normal, and there was nothing remarkable about the gait, and no apparent decrease of muscular power. The mental state was marked by elation, with an absurd opinion of his powers in all directions, and silly projects—*e.g.*, he intended to publish a song which he said he had written and composed, but which was simply "The Wearing of the Green" with a few alterations in the words. There was,

however, freedom from belief in absolute impossibilities. He was very angry at being sent to an asylum, made a determined attempt to escape, and kept grumbling at everything, but would change readily and become elated. He was also slightly hypochondriacal, and was emotionally variable. Tonic treatment was adopted, and in a month he showed some improvement. It was then decided to try iodide of potassium (although syphilis seemed to be excluded), and under this he continued to improve, and was sufficiently well to be discharged in three months, by which time he was much more rational, and agreed to abstain from business for a time, though he still maintained that he had not required asylum treatment. So far as is known, he has done well since his discharge about six months ago.

Had this patient been known to have had syphilis the case would undoubtedly have been set down as one of incipient general paralysis: indeed, although syphilis was excluded as far as it can ever be, general paralysis was the diagnosis arrived at by most of the medical men who saw the patient about the time of his admission, and it is not even yet absolutely negatived, as the apparent improvement may be merely a remission. Still, the physical symptoms were very badly marked, and the ocular phenomena present were to a considerable extent accounted for by the optic atrophy, which may have been started by injury, as stated, so that possibly we have to do merely with an attack of reactionary simple mania, following an exhaustion melancholia in a neurotic subject. In any case the further history of the patient is a matter of interest.

Chronic Morphinism.—The following is worth notice on account of the unusual ease with which the drug was discontinued:—

CASE VII.—The patient, a young medical man, free from neuropathic heredity, who had been a keen student and an athlete, began to take morphin for the purpose of relieving the sensation of fatigue from over-work in his profession. At first he took pharmacopœial doses, but for about 18 months before admission his daily quantity was 6 to 8 grains. He found that the effect was much the same whether the mode of administration was oral or hypodermic; in the former case he used the dry powder.

Fortunately, beyond relief of fatigue and avoidance of the abstinence symptoms, the drug produced no pleasant sensations, and was of late taken solely to obviate the latter. The bodily effects were muscular weakness and wasting, with some digestive disturbance (nausea and vomiting, especially in the morning). There had been no necessity to increase the dose for some time before admission, and, as a matter of fact, it must have been much in excess of his requirements, as just before admission the daily quantity had been reduced to 1 gr. without causing discomfort, and with the result of stopping all digestive trouble. On admission he looked pale, debilitated, and nervous, and if left too long without morphin began to suffer from restlessness, muscular twitchings, and cutaneous sensations resembling that produced by the plucking out of hairs. These, with wakefulness, were the only abstinence symptoms, and appetite and digestion have been good throughout. Only on two occasions since admission was he given more than 1 gr. in the day, and in 17 days the drug was stopped altogether. No unpleasant symptoms or cravings have occurred in the intervening period of nearly six months, and under tonic treatment he has become strong and well, and able to do some mental work.

The patient's clear heredity and previous healthy life, combined with the absence of any seductive effects from the use of the drug, are doubtless accountable for the ease with which its discontinuance was effected in this case. It may be added that he was himself most anxious to be cured of the habit.

Physical Accompaniments of Mental Disorder.—The two deaths which occurred during the year were both due to heart-failure in old persons, who were the subjects of *chronic nephritis*. Both were cases of melancholia, and it has been our experience that depressive states of mind are the psychoses which most commonly accompany chronic renal disease. One of the patients, however, showed great mental improvement before her death.

Systematic periodical examination of the urines led to the discovery of small quantities of *albumen* in six other cases, but in all but two (a melancholic known to be suffering from chronic nephritis, and a case of cystitis) it was quite transitory. All the cases were more or less depressed, except one.

In the same way *glycosuria* was found in no less than eight cases, but only on one or a few occasions, except in that of a single patient. The cases included: chronic melancholia, 1; acute melancholia, 1; stupor, 1; hebephrenia, 1; katatonia, 1; chronic mania, 1; dementia, 1; and a case of minor epilepsy, who had several attacks of acute insanity during the year—more than he has ever had before. In this case the glycosuria still persists, but exerts no apparent influence on the bodily health. His mental state is usually one of mild depression, but the acute attacks began with exaltation and passed into very acute delusional melancholia. Thus all the cases, except one, display a somewhat depressed state of mind—a result which, upon the whole, harmonises with previous observations.

The *mean arterial pressure* was observed in two fresh cases, and fresh observations were made in two of the former ones. In both of the fresh cases it was elevated, one being the case of katatonic stupor, and the other, the fourth case described above, which was, it will be remembered, somewhat depressed. In the older cases, one of subacute melancholia showed a normal pressure, and in the second, one of acute melancholia, the pressure failed to fall with improvement in the symptoms. It was, however, unfortunately not taken after full recovery.

Physical Health.—The health of the Institution during the year has in general been good, and there have been no epidemics. The only case calling for notice under this head is that of a lady of sixty, who had a severe attack of streptococcus cellulitis last winter, which appeared to be cured entirely by anti-streptococcus serum.

CASE VIII.—On December 4th she inflicted a slight cut on the back of her right hand, which speedily inflamed, and in spite of antiseptic applications the inflammation continued to spread. On December 7th free incisions were made, but they only served to relieve tension, as there was very little pus. Mr. E. H. Taylor was called in consultation, and as the inflammation continued to spread and right-sided pleurisy developed on the 13th, he advised a resort to serum. 20 ccs. were injected on the 14th, and 10 ccs. daily on the four following days. On the 14th a systolic bruit was audible towards the apex of the heart, and on the 18th the left popliteal vein was found to be thrombosed, with œdema of

the leg. Nevertheless, the patient began to improve from the time of the first dose, the unfavourable signs all passed off, and she made an excellent recovery, uninterrupted except for a slight feverish attack, with rash on the elbows and knees, due to the serum. As has not infrequently been observed in such cases, the patient's health, both bodily and mentally, is actually better since this attack, but her insanity is of too long standing for any great degree of improvement. It may be added that streptococci alone were found in cover-glass preparations made from the pus.

Treatment.—Five patients were subjected to *thyroid treatment* during the year. One of these, a case of recurrent melancholia, which was treated in the same way in the previous year, continued to derive considerable benefit from 5 gr. doses of the dried gland thrice daily, given only during the attacks, which appeared to be mitigated thereby, both as to severity and duration. In the other four cases, which included two of melancholia (one stuporose), one of katatonia, and one of subacute mania, the drug was given in large doses for a short period, during which the patient was treated as if suffering from a slight fever. The first patient, one suffering from melancholia of about a year's standing, received 460 gr. in 9 days, and reacted well physically. No change took place at first, but she soon began to improve, and was discharged on probation in about three months. Unfortunately, the improvement has not been permanent, and she has since returned. The katatonic patient received 630 gr. in 11 days, but although there was fair physical reaction, any mental improvement was very transitory. The case of stuporose melancholia was treated with 445 gr., spread over 8 days, but showed no mental improvement, though this is one of the cases where such might have been looked for. The patient suffering from subacute mania took 475 gr. in 9 days, and showed marked, but not very permanent, improvement soon afterwards. Thus, the results this year were not very remarkable, though in three cases more or less improvement, unhappily only temporary, did take place.

Suprarenal administration was tried in two cases. In the first, one of acute mania, doses at first of 10 gr. and later of 15 gr. were given for about a month, during which the patient

certainly improved, but as some improvement continued after they were stopped it cannot certainly be claimed as due in the first instance to the drug. In the second, also of acute mania, doses rising from 10 gr. to 20 gr. thrice daily were given on about 10 days, with no apparent effect. Later on the administration was repeated and seemed to have no effect at first, but marked improvement took place on the day on which the drug was stopped, which may have been due to reaction, or may have been a coincidence.

This last case, which was a very difficult one on account of the acuteness and violence of the symptoms, derived considerable benefit from hydropathic treatment in the form of the wet pack, combined with over-feeding. The pack, which was tried by the suggestion of Dr. Conolly Norman, was used for about 8 hours daily for some weeks, and was the first therapeutic measure to yield any good result. The most marked effect, however, seemed to be produced by the free administration of arsenic, under which the patient has made rapid progress, both mentally and physically, and has gained greatly (about $1\frac{1}{2}$ stone) in weight. Unfortunately, cases of acute mania are difficult to draw correct conclusions from, as they tend at times to recover rather suddenly, even without medicinal treatment.

As has already been noted, one case which greatly resembled early general paralysis seemed to derive some benefit from large doses of potassium iodide, although syphilis was as far as possible excluded.

In one of the glycosuria cases the output of sugar was reduced to an infinitesimal quantity by aspirin, given in 10 gr. doses thrice daily, as recommended by Williamson.^a

THORACIC CANCER.

At a recent meeting of the Société de Chirurgie, Paris, M. Quénu notified the death of M. Faure's patient, from whom the thoracic portion of the œsophagus had been excised for cancer. The inferior extremity of the tissue had become terribly septic. Until we find some means of safeguarding patients from this risk M. Quénu considers that the ablation of the thoracic œsophagus for cancer should be discontinued.

^a Brit. Med. Journ. II., 1902. P. 1946.

PART II.

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

Medical Microscopy: Designed for Students in Laboratory Work and for Practitioners. By T. E. OERTEL, M.D.; Professor of Histology, Pathology, Bacteriology, and Clinical Microscopy, Medical Department, University of Georgia. With 131 Illustrations, some of which are Coloured. London: Rebman, Limited. 1903. Pp. 350 of text.

THE first paragraph of the author's preface reads as follows:—
“In this day of multiplicity of medical books none should venture to afflict the medical public with a volume which is not called for by some legitimate voice. *Believing this, I have still brought forth the following work.*” The italics are ours. We have thought the passage worth emphasising, as it exhibits a peculiar frame of mind on the part of the author. He appears to suspect that the “voice” which inspired him with the design of producing this book was not altogether “legitimate.” We can unhesitatingly confirm his suspicion, though we should hardly have selected that way of putting it. We can assure him that he has ventured to do precisely that which he says ought not to be done. He has ventured to inflict upon the medical public an utterly superfluous work. There is only one consolation in reviewing it, and that is, that the affliction is not likely to be of long duration.

The first chapter of the book deals with the microscope, and essays an account of the optical principles underlying its use. The figures with which that account is accompanied contain several inaccuracies. Fig. 2 represents two rays of light entering prisms at an angle, and undergoing no refraction at the point of entrance. In fig. 8 the letters *a, b*, appear to indicate the actual object, whilst the text states that they indicate the virtual magnified image. No explanation of the construction of an objective is given, though there is a figure purporting to show the arrangement of the lenses.

On p. 26 we are told that the angle of aperture of the lenses in figs. 13 and 14 is a, b, c , whereas a glance at the figure shows that it is b, a, c . On p. 27 we are told that the unaided normal eye is capable of seeing 200 ruled lines within the space of one inch. Surely this is not so.

The text bristles with small inaccuracies hardly worth while reciting, but producing a distinct impression of slovenly workmanship. Thus in the list of microscope-makers we find "E. Leitz, of Wetzlar, Reichert, of Vienna, Germany," and so on.

The next chapter deals with the fixation of tissues. The author mentions absolute alcohol, "synthetic alcohol," "commercial alcohol," formalin, and Müller's fluid, but gives no indication as to what class of material each is best suited for. He then proceeds without further ado to describe infiltration methods, beginning with celloidin. In connection with this method he would allow the worker to use 95 per cent. alcohol instead of absolute (!). He appears to think that large sections can be cut by the paraffin method. This, of course, is the case; but still larger can be cut by the celloidin method, yet the author does not say so. He complicates the paraffin method by requiring two paraffin baths, each lasting 12 hours. His account of how the object should be imbedded could not be understood by anyone not already familiar with the details of the process—in other words, would be useless to those for whom it is intended. Dr. Oertel calls a fluid used for causing paraffin sections to adhere to the slide a "fixative." He does not seem to know that plain water will serve the purpose when properly used. But it is quite needless to give further details.

The book goes on to describe bacteriological methods, tumours, blood-films, urine, &c., &c., all on the same lines—scrappy, imperfect information, just stopping short of what is really needed.

The illustrations are mostly copied either from manufacturers' catalogues, or from such well-known works as von Ziegler's "Pathology," and Fraenkel and Pfeiffer's "Atlas of Bacteriology." Those of which the source is not given, and which are, therefore, in all probability original, are perfectly useless. They are mostly very bad microphotographs, quite

unrecognisable without the label. Good examples of this style of picture can be seen on pages 218 (melanotic sarcoma), and 226 (melanotic "carcinoma"). They are typical specimens of what illustrations ought *not* to be.

The book is nicely got out, but we cannot congratulate Messrs. Rebman in having selected it for presentation to the British reader.

Bacteria in Daily Life. By MRS. PERCY FRANKLAND.

London: Longmans, Green & Co. 1903. 8vo. Pp. 216.

THIS is not a new book, but a reprint in book-form of several articles contributed by the authoress to various popular periodicals. As may be anticipated from the above description, its contents are neither very new nor very profound, and, accordingly, require a comparatively brief review in this place. Their general scope may be gathered from their titles—"Bacteriology in the Victorian Era" [was there any previously?]; "What we Breathe;" "Sunshine and Life;" "Bacteriology and Water;" "Milk Dangers and Remedies;" "Bacteria and Ice;" and "Some Poisons and their Prevention."

Mrs. Frankland's style is somewhat diffuse, and her facts are diluted to suit the intellectual palate of a class of readers to whom, as she evidently considers, ordinarily concise exposition would be only so much *cariare*. The result is a product that will hardly attract the medical reader—of a surety not the younger men. It might have been well if Mrs. Frankland had availed herself of the opportunity offered by the reprinting of her essays to bring the subject-matter up to date. But she has not done so. Numerous citations might be given in support of this. Thus, for example, on pp. 29 and 30 we find in connection with the rôle of flies in the dissemination of typhoid no allusion to the additional facts collected during the late war by officers of the R. A. M. C., in support of the view that these insects do really convey the bacillus. Not a word is said about the rôle of the *tse-tse* fly in the propagation of that dread malady *Nagana*, nor does Mrs. Frankland appear to know that malaria is propagated by the mosquito. The inference would appear to be justified by the absence of all allusion to the fact in the course of four pages (27–31),

devoted to the part played by flies and other insects in the spread of disease-germs. The passage reads like the play, without the part, of Hamlet. Nor are the few facts vouchsafed by the authoress always correct. Thus, on p. 172 we find it stated that Dr. Kolb has isolated the rinderpest bacteria from the gall of infected animals, and, moreover, has found them on isolation to possess "their full complement of virulence." So far is this from being the case that no one has yet succeeded in seeing the rinderpest microbe, much less in isolating it. Its shape and other morphological characters are entirely unknown, and we can only suppose that it belongs, together with the organisms of rabies and foot and mouth disease, to the group or category of ultra-microscopic organisms. Mrs. Frankland would appear to have misunderstood the passage in Neufeld's paper in the *Zeitschrift für Hygiene*, where he says that Kolb was able to *separate* the *materies morbi* of this disease by centrifuging the bile.

It would serve no good purpose to adduce further examples of the faults to which we have referred. The best that can be said of the book is that it is calculated to induce a certain desultory class of readers to take a momentary interest in some of the great problems with which the graver type of mind is seriously occupied.

The Internal Secretions and the Principles of Medicine.

By CHARLES E. DE M. SAJOURS, M.D. Volume First. Philadelphia: F. A. Davis Company. 1903. Pp. 800.

STRUCK by the well-known fact that between the time the oxygen leaves the blood and that at which it reappears as carbonic acid we cannot trace this element, the author endeavours to gain more knowledge of tissue respiration, and in his studies arrives at certain conclusions which have the merit of boldness and originality, while as to their truthfulness we confess we have our doubts.

The marked affinity of adrenal extractives for oxygen furnished a clue which led him "to realise that the adrenals could be considered as the key, not only to tissue-respiration, but also to the function of all other organs now classed as ductless glands. And even these developments assumed

secondary positions when it became evident that the better known organs, such as the heart, lungs, liver, &c., were, so to say, subsidiary structures, the instruments, in a measure, of the smaller ductless glands, and destined to fulfil the mandates of the latter."

Traced to the pulmonary alveoli, the secretion of the adrenals was found to combine with the constituents of hæmoglobin, methæmoglobin (hæmatin), and hæmotoporphyrin (hæmatoidin), which, as well as the plasma, it endowed with their affinity for oxygen. The red corpuscles are "secondary factors" in the transport of oxygen, while "it is the oxygen-laden adrenal secretion dissolved in the plasma itself which carries on all the oxidation processes of the organism." The various blood ferments which have been described from time to time as the oxidation ferment, the glycolytic ferment, and so on, are held to be identical with the oxygen-laden adrenal secretion, for which the author suggests the name *adrenoxin*.

In explanation of the ease with which the oxygen dissolved in the plasma can penetrate the different tissues, comes the discovery that "various structures, the functions of which were unknown, were in reality blood channels, or rather plasma channels." The axis cylinders of nerves, the dendrites of nerve cells, the neuroglia fibres, and many other structures have this function. In the case of the heart, the adrenal secretion on which the contractions depend penetrates the tissue by the Thebesian veins, although the functional importance of the coronary arteries is not altogether denied.

It next became necessary to ascertain the identity of the agencies with which the oxygen of the plasma combined. This is myosinogen in the muscles, fibrinogen in the blood, myelin, or "its active constituent" lecithin, in the nervous system. "This myeline was not only found to surround the axis cylinders of all nerves, but also to line the inner surface of the dendrites of neurons, and to form the ground substance of their cell body. It thus became apparent that the entire nervous system was built upon the same plan—i.e., cylinders containing oxygen-laden plasma surrounded by a layer of myeline, and that the reaction between these two bodies served to form and liberate nervous energy." —22—

Further investigation showed that the adrenals are directly connected with the anterior pituitary body through the solar plexus, the splanchnic nerves and the cervico-thoracic ganglion of the sympathetic. The anterior pituitary body "proved to be the most important organ of the body, as governing center of the adrenals, and, therefore, of all oxidation processes"; and increased or diminished metabolism was due to increased or diminished activity of the pituitary body.

The functional efficiency of the pituitary body was then found to be sustained by the secretion of the thyroid gland—"iodine in organic combination." Excessive production of this secretion over-stimulates the pituitary body and causes exophthalmic goitre, while diminution of secretion, by inhibiting the function of the pituitary, causes myxœdema. "The thyroid gland, the anterior pituitary, and the adrenals were thus found to be functionally united—i.e., to form an autonomous system, which we termed the adrenal system."

We next come on a very large generalisation. The action of thyro-iodine on the pituitary is the same as that of any poison introduced into the blood. They all act on the adrenal system, and not on the blood or cellular elements. "What are now considered as symptoms of infection or poisoning are all manifestations, more or less severe, of *over-activity or insufficiency of the adrenal system*. Indeed, *the physiological action of remedies was also traced to the anterior pituitary body, the governing center of this system*." This theory is held to explain nearly all diseases, among which cholera Asiatica, cholera infantum, arsenical poisoning, tuberculosis, and syphilis are shown to be merely due to adrenal insufficiency. The action of drugs, too, is simply explained on the author's views.

But we have not yet reached the end of this remarkable chain of concatenated organs. The posterior pituitary body is second in importance only to its neighbour the anterior pituitary. It is "*the chief functional center of the nervous system, its numerous groups of neurons forming the starting point or highly specialized center, of a single class of nerves*." It is "*the anterior pituitary body's co-center in sustaining the cellular metabolism of all organs*." It was further

ascertained "that the posterior pituitary was an important feature of the morbid process in influenza, hay-fever, hysteria, catalepsy, and other obscure affections."

The spleen and pancreas are closely connected in their functions. Not only has the author confirmed the views of Schiff and Herzen as to the action of the spleen in converting the pancreatic trypsinogen into trypsin, but he finds that this ferment is secreted in part into the blood, and there, together with adrenoxin and fibrinogen, destroys toxic albuminoids, including "all toxins and diastases secreted by bacteria, proteids, toxalbumins, vegetable poisons and venoms." Insufficiency of either of the three factors mentioned above compromises the issue of the disease. In typhoid fever fibrinogen is wanting, but in diphtheria trypsin. "The dominant active principle of antitoxin proved to be trypsin."

Many of our readers will be pleased to hear that this theory makes unnecessary the multiplicity of antitoxins, cytolytins, and haptophore groups which Ehrlich connected with his side chain theory. His amboceptor is the author's oxidising substance or adrenoxin, and his complement is the spleno-pancreatic internal secretion or trypsin.

Finally, we come to the white blood corpuscles, without whose intervention no pathological theory is, at the present day, complete. These bodies are endowed with functions greatly exceeding in importance any yet assigned to them, even hypothetically. They "supply the organism with the agencies that combine with the oxidising substance to ensure the continuation of life and the efficiency of all organic functions. The neutrophils, Metchnikoff's wandering phagocytes, were traced from the solitary and agminated follicles to the cavity of the intestine, where they ingested proteids; then through the villi, mesenteric veins and portal veins, where they absorbed the spleno-pancreatic secretion—i.e., the trypsin which Metchnikoff found them to contain. These cells formed, we ascertained, *peptones*, *myosinogen*, and *fibrinogen*—all globulins—from the proteids ingested by them, and distributed these products to all tissues, the muscles, and the blood itself. Ehrlich's eosinophils, non-phagocytic leucocytes, asserted their identity as daughter cells, the separation from their parent cells, the neutrophils, occurring in the liver by

mitosis. They were traced to the pulmonary alveoli, where they participated in the formation of the nucleated epithelium. Their product proved to be *hæmoglobin*. The basophils were found to take up fats derived from food-stuffs which penetrated the lacteal and lymphatic ducts, to convert them into myeline granules and to distribute them throughout the entire nervous system."

Such are the main conclusions of the author, given as far as possible in the words of his own summary of the contents of this volume. It will be seen that they are pretty far-reaching, and if established they would revolutionise our views to a very considerable extent. For the present we think we may abstain from criticism, and leave the matter to the judgment of our readers.

The work is excellently brought out by the publishers. The text is illustrated by several well-executed plates, many of which are in colours.

Protozoa and Disease. By J. JACKSON CLARKE, M.B. Lond.
Part I. London: Baillière, Tindall & Cox. 1903.

THIS is a well brought-out and highly instructive book of 168 large octavo pages, printed on good paper, and provided with nearly a hundred illustrations, many of which are semi-diagrammatic sketches by the author, whilst some are reproductions of microphotographs by L. Pfeiffer and others. In view of the large amount of attention which the protozoa have attracted within the last few years, a clear and well-illustrated account of these organisms is undoubtedly a *desideratum*. The recent elucidation of the life-history of the malarial parasite by Ross, MacCallum, and Grassi has excited in many minds the desire of becoming acquainted with the systematic relationship of an organism which, despite its unicellular structure, exhibits such a marvellous fertility of resource and such developmental complexity. The increased mortality from cancer—whether real or apparent—has likewise conduced to rivet attention on the protozoal organisms, for it is universally conceded that, should cancer prove to have a micro-organismal ætiology, it is amongst the protozoa that its exciting cause will be found. Indeed, the author of

this book was, at one time, if we mistake not, one of the most ardent advocates of a parasitic causation, not merely of epithelial cancer, but also of sarcoma. In the present work he has, very wisely, we think, refrained from referring at any length to these observations, the true interpretation of which, despite all the persevering work of the past decade, still remains uncertain.

To Mr. Jackson Clarke belongs the indisputable credit of being the only one—so far, at least, as we are aware—amongst the advocates of the parasitic theory of cancer who has given to the world a convincing demonstration of his personal acquaintance with the class of organisms the rôle of which is in question. The book lying before us on the table is proof positive that he has assimilated the work of others, and has personally studied many of the principal types. One consequence of Mr. Jackson Clarke's familiarity with his subject is that his treatment of some of its more complex portions, whilst adequately clear to the reader whose biological training is up to a high standard, will scarcely be followed by even a medical reader of average acquirement in this department. Thus, his account of the development of the malarial parasite simply bristles with technical terms, most of which he leaves unexplained. The biological reader can infer their significance. Others will be puzzled. He fails to bring out the contrasts between the two cycles of development, and although he gives to the asexual one its correct name (schizogony), we cannot find that he gives the corresponding appellation of the sexual cycle (sporogony), though he mentions it later on. He gives, however, a fairly complete account of the morphology of all the protozoa, including the sarcodina, sporozoa, gregarines, coccidia, neosporodia, serumsporidia, flagellata, and ciliata. He takes the sporozoa in the wrong place, allowing the gregarinida to slip in between the malarial parasites and the remainder of the hæmosporidia. We would further point out that a bibliographical appendix would have been of much value, as most of the references are very incomplete in form, and hardly admit of verification. The author does not give credit to some of the writers from whom he has largely drawn inspiration—Lühe, for example. Nor could we find an explicit reference to Doflein. Mr. Clarke's grammar is

not always above reproach, as witness the following sentence with which he begins Chapter III. :—" This class of the protozoa are all parasitica." We also came across typographical errors that ought not to have escaped correction—*e.g.*, *amitotis* (p. 15); millimetres on p. 24 (should be micro-millimetres or micra); *zoosporida* (same page); Cienowskyi on p. 30 (should be Cienkowski); chromation, instead of chromatin (p. 78). Yet we think that, despite these blemishes, Mr. Clarke's work is one deserving of much praise. It brings together in a small compass information not readily accessible, and this information is for the most part accurate, up-to-date, and rendered easy of assimilation by well-selected pictures of the organisms described. In a word, we can, and do, warmly recommend the book.

Physical Chemistry for Physicians and Biologists. By DR. E. COHEN. Translated by MARTIN H. FISCHER, M.D. New York: H. Holt & Co. 1903.

IN a prefatory note by Professor Loeb it is stated, and with perfect truth, that the influence of physical chemistry upon the development of physiology and biology is so considerable that those who wish to follow the progress of the latter sciences must needs familiarise themselves with the principles of physical chemistry.

Professor Cohen has set himself the task of giving a *résumé* of these newer conceptions in their applications to medical and biological problems, and we cordially welcome his efforts, seconded by Dr. Fischer's excellent translation.

Let no one imagine that the book is very easy reading; and we observe with regret that although there is a tolerably full index, yet there is no table of contents, or even list of headings of the seventeen lectures which make up the volume.

The work is not a systematic text-book, and we can best indicate its scope by pointing out the principal topics which are discussed.

Lectures I. and IV. treat of the velocity of chemical reactions, and to thoroughly follow them an elementary knowledge of the calculus is assumed.

Lecture II. deals with the inversion of cane sugar, and enters

into the difficult question of catalytic action, a matter which concerns many physiological problems, and leads naturally on to a consideration of the mode of action of ferments. Here attention is directed to the important and interesting recent researches of Bredig and Müller von Berneck upon the action of inorganic ferments—*e.g.*, finely divided platinum.

Three lectures are devoted to a discussion of the fundamental phenomena of chemical equilibrium; subsequent lectures treat of the friction of liquids, osmotic pressure, determination of molecular weight of substances in solution, electrolytic dissociation, and, lastly, electromotive force.

Lectures XIII. to XV. point out some of the applications of physico-chemical principles and methods to various fields of practical research—*e.g.*, hygiene, pharmacology, and physiology. This portion of the volume will, we fancy, appeal most strongly to well-educated physicians and to professors of *Materia Medica* and *Therapeutics*.

To those who can read German, and desire to pursue the subject, we can cordially recommend a small treatise by Dr. Köppe, "*Physikalische Chemie in der Medicin.*" which covers part of the ground occupied by Dr. Cohen's book, and is largely taken up with a lucid account of osmotic processes in relation to vital phenomena.

A Short Manual of Inorganic Chemistry. By A. DUPRÉ, Ph.D., F.R.S.; and H. WILSON HAKE, Ph.D. Third Edition. London: C. Griffin & Co. 1903.

THIS book, which has achieved the well-merited success of a third edition, is a clearly written account of modern inorganic chemistry. It is, in parts, closely condensed and requires careful reading, and is quite up to date.

The introduction, which covers 100 pages, deals chiefly with such topics as elementary molecular mechanics, atoms and molecules, thermo-chemistry, chemical affinity, and the periodic law. It is plainly impossible within these limits to give more than a meagre account of some of these subjects.

Useful features are "a review and general survey" of the eight commoner elements—*viz.*, O, H, N, C, B, Si, S, P—after their properties and compounds have been described;

and, also, a brief account of the general relations of each of the periodic groups, which precedes their description.

Another, although minor, point of interest crops up here and there in the etymological and historical notes.

Thus we learn, on Skeat's authority, that the word "water" is related to the Aryan root "wad," to well or gush out. And, again, we are glad to know that black oxide of manganese was long ago styled *magnesia nigra*, to distinguish it from *magnesia alba*, which contained what we now term magnesia (MgO). When, later on, it was shown that magnesia nigra contained a new metal, this was called *magnesium* by some, and *manganesium* (to avoid confusion) by others—the latter term being finally adopted, while *magnesium* was retained for the metal of magnesia alba.

At page 301 we are told that the "mantles" of incandescent gas burners consist mainly of thorium dioxide (ThO_2), together with a small proportion of the oxides of cerium and allied rare metals.

For many years it was firmly believed that if anything was well known it was the composition of the atmosphere. Yet all the time nearly one per cent. of an unknown gas lurked in it until the secret was revealed by Lord Rayleigh and Professor Ramsay in 1894, and the gas was named *argon*, from its inertness. Argon has not as yet been induced to form compounds, but it has been extracted by heat from the mineral *malachite*, and has been found in one sample of meteoric iron.

It is worth while to reproduce a table of the average composition of the atmosphere by volume, which includes the latest discoveries :—

					Per cent.
					By volume
Oxygen	..	..	..	..	20.61
Nitrogen	..	..	..	..	77.61
Argon	..	..	..	..	0.94
Carbon dioxide	..	..	..	..	0.04
Aqueous vapour	..	..	..	..	1.40
Nitric acid and ammonia			..	..	traces
Helium, neon, krypton, and xenon				..	traces

Neon constitutes probably less than one part in 50,000; the other rare gases in even much smaller proportions.

The volume under notice can be thoroughly recommended as a compact and reliable compendium of inorganic chemistry, and deserves to attain a wide circulation.

Transactions of the American Surgical Association. Volume XX. Edited by RICHARD H. HARTE, M.D.; Recorder of the Association. Printed for the Association for sale by William J. Dornan, Philadelphia. 1902. Pp. 571.

THE volume before us contains a variety of interesting papers on different subjects.

Abdominal surgery, as we might expect, occupies a large portion of the volume.

The surgery of hypertrophied prostate, which has been engrossing the attention of surgeons for the past couple of years, has a paper devoted to it by Dr. James E. Moore, of Minneapolis, in which he advocates the perineal route in prostatic surgery for both anatomical and technical reasons.

Two interesting papers by Herbert L. Burrell, M.D., of Boston, and Joseph D. Bryant, M.D., of New York City, on "The Teaching of Surgery," will be found worthy of perusal.

A very large number of the papers read at the Annual Meeting of the American Surgical Association last June, and published in this volume, have already appeared in the "Annals of Surgery" from month to month; consequently detailed reference to them now is unnecessary.

The volume is one deserving of perusal. An appendix contains an alphabetically arranged index of Volumes I. to XX.

Cancer: its Causation and its Curability without Operation.

By ROBERT BELL, M.D. Glasg., F.F.P.S., &c.; Consulting Physician to the Glasgow Hospital for Women. London: Baillière, Tindall & Cox. 1903. Pp. 271.

THE title of this little volume is an attractive one, but on reading through it the attraction vanished. The author tells us in the preface that if "cancer is ever to occupy a place upon the list of curable diseases the public must of necessity be taken into our confidence, and be educated up to the point when they will be enabled to recognise not only the disease

in its initial stage, but the conditions of life which tend to lead up to its development." If we only knew for a certainty what the conditions of life were which led to its development, then, of course, an honest endeavour might be made to prevent its occurrence. We cannot, however, accept the statement of Dr. Bell that gout and rheumatism are the essential factors underlying the development of cancer. His book certainly appears to us to be written more with the object of catching the eye of the public, and advertising himself and his views, than from the idea of making known to the profession any scientific or interesting discovery. If the author expected to obtain notoriety as a scientist or reputation for his literary accomplishments, then, we think, the only word to express the result we anticipate for his efforts is "failure."

Hand-book of Physiology. By W. D. HALLIBURTON, M.D., F.R.S.; Professor of Physiology, King's College, London. Fifth Edition (being the Eighteenth Edition of Kirke's Physiology), with upwards of seven hundred illustrations, including some coloured plates. London: John Murray, Albemarle-street. 1903. 8vo. Pp. xxiv. + 312.

So recently as January, 1902, we noticed the fourth edition of Dr. Halliburton's excellent *Hand-book of Physiology*. We had some criticisms to offer upon that occasion in relation to the arrangement of the subject-matter.

These criticisms have not been effective, but then the author frankly admits in his preface that the rapid exhaustion of the last issue of the work necessitated a somewhat hurried preparation of a new edition: and, therefore, as the old type was still standing, the alterations made in the main text are only of a minor kind. The work has, however, been brought fully up-to-date in a full and important Appendix of some twenty-two pages of small type. We are sorry that so valuable an addition should have been printed in long primer instead of small pica, like the greater part of the volume. This is a serious disadvantage to many readers, and may lead students to under-estimate the importance of the topics which are discussed.

A mere enumeration of the contents of the Appendix will

show that Dr. Halliburton has not overlooked the discoveries made by physiologists within the last year or two, especially in connection with digestion and the nervous system. Pawlow's observations on the reflex salivary secretion and on the secretion of the pancreas are briefly described. The so-called peripheral reflex secretion of the pancreas is called in question in view of the investigations carried out by Starling and Bayliss, and their discovery of the excitant, which they have provisionally termed *secretin*.

Pawlow's investigations on the "succus entericus" are next detailed, as well as those conducted by Starling, Hamburger, and Otto Cohnheim. Mett's tubes for estimating the proteolytic activity of a digestive juice are mentioned, and the method of using them is described.

There are also sections or paragraphs on Schütz' law (first stated in 1885) that the amount of peptic activity is proportional to the square root to the amount of pepsin; on the *wraving* or *pendulum* movement of the intestines, described by Starling; on Nussbaum's experiments on the kidney; on osmotic phenomena; on Waller's method of testing excitability; on fatigue in nerves, cerebral localisation, function and myelination, investigated by Flechsig's embryological method; on association fibres and association centres; and on Flechsig's recent results on myelogenesis.

It will thus be seen that the author has kept his work well abreast of physiological research and discovery. Therefore it is that we are in no doubt as to the successful future which awaits this fifth edition of so admirable a Hand-book of Physiology.

Catechism Series. Physiology. Parts I. and II. Second Edition. Edinburgh: E. & S. Livingstone.

It is not necessary to do more than note the appearance of the second edition of these parts of "The Catechism Series," published by Messrs. E. & S. Livingstone, which have become so popular among medical students. Paper, type, and general style are all worthy of the eminent Edinburgh publishing firm, which has been so enterprising as to bring out "The Catechism Series."

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Analytical Report, Sept. 6, 1902.)

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PART III.

SPECIAL REPORTS.

REPORT ON PRACTICE OF MEDICINE.

By H. T. BEWLEY, M.D., F.R.C.P.I., Physician to the Adelaide Hospital, Dublin.

- I. CREOSOTE IN PNEUMONIA.
- II. POTATOES IN THE DIETARY OF DIABETIC PATIENTS.
- III. THE TREATMENT OF ASTHMA IN CHILDHOOD.
- IV. ACETOZONE IN TYPHOID FEVER.
- V. EXPERIMENTS IN LOCAL TREATMENT.
- VI. OLIVE OIL IN GASTRIC ULCER.
- VII. ON APOMORPHINE.
- VIII. GLYCOSURIA WITHOUT AN EXCESSIVE AMOUNT OF SUGAR IN THE BLOOD.
- IX. ORTHOFORM IN THE DIAGNOSIS OF GASTRIC ULCER.
- X. THE BACTERIOLOGY OF EMPYEMA IN CHILDREN.

I. THE TREATMENT OF PNEUMONIA.

DR. WILCOX (New York) has found creosote carbonate of great use in combating the toxæmia of pneumonia. Cassonte and Corgier, he writes, reported that after continuous administration of fairly large doses of creosote carbonate in most cases a typical fall of temperature occurred during the first twenty-four hours of treatment, and if the treatment was continued the temperature did not again rise. Relapses and sequelæ were absent. The daily dose was two to four drachms, given in divided portions every six hours. As soon as the temperature becomes normal the amount is reduced to one-half, and this is continued as long as auscultatory signs persist.

Wilcox and other clinical observers have used this treatment in a large number of cases: their conclusion is that creosote carbonate cuts short a large percentage of cases, mitigates other cases, and in a small percentage produces no result. Wilcox records 33 cases treated without a death.

In addition to the employment of creosote carbonate, Dr. Wilcox recommends that particular attention be paid to the emunctories, so that all avenues by which toxins can be eliminated may be open. In patients suffering from chronic Bright's disease of the interstitial variety, he advises intestinal irrigations of a gallon of decinormal saline infusion, at a temperature of 108°, practised twice daily through a rectal tube, and finds it a most valuable method of provoking diuresis, stimulating the heart, and to a less extent producing diaphoresis. Intestinal antisepsis—one-sixth of a grain of calomel every hour for six doses with saline laxatives enough to empty the bowels completely and keep them open afterwards, and 3 to 6 grains of zinc sulphocarbolate every 2 to 4 hours until the stools are odourless, and then just enough to keep them so—has been of frequent use.—*Amer. Jour. of Med. Sci.*, Sept., 1902.

Van Zandt has sent circulars to medical journals and individuals concerning the effect of creosote in pneumonia. He has received replies from seventy-five sources representing 1,130 cases. Of these, fifty-six ended fatally—a mortality of less than five per cent. About half of those replying were of opinion that creosote can abort pneumonia, while the reporters were almost unanimous in claiming that the disease was mitigated by the use of the drug. Van Zandt claims that these replies support his opinion that a large percentage of pneumonic cases are cut short or aborted, almost all the rest are mitigated, and the remainder, a very small percentage, are not at all affected by the remedy.—*Med. Rec.*, N. Y., October 18, 1902, and *Ed. Med. Jour.*, April, 1903.

II. THE TREATMENT OF DIABETES MELLITUS AND ITS COMPLICATIONS BY THE USE OF A DIET CONTAINING POTATOES.

Mossé (*Revue de Médecine*, 1902, pp. 107, 278, 371, and 621) in a series of articles deals with his experiences in the use of potatoes in the treatment of diabetes mellitus. He starts out with the statement that the object sought for in the treatment of diabetes mellitus is the prevention or reduction of the hyperglycæmia. This may be brought about either by stimulating organic combustion, and thus hastening the destruction of the grape sugar, or by suppressing from

the diet or reducing to a strict minimum the sugars and carbohydrates convertible into glucose.

Mossé says that potatoes are generally held to be *injurious* in diabetes, and are usually placed in the list of forbidden articles. He believes, on the contrary, that they are not only *permissible*, but even *useful*. Potatoes may, with advantage to the patient, be given in substitution for wheat bread in the proportion of 2.5 to 3 of the former (weighed raw) to one of the latter. In his dietetic experiments he allowed his diabetic patients to have the enormous amount of 1 to 1.5 kilogrammes of potatoes (weighed raw) daily. In some instances the amount was increased up to 3 kilogrammes, or about six pounds. Wheat bread contains from 47 to 55 per cent. of starch, whereas fresh potatoes contain from 16 to 24 per cent., or an average of 20. The potatoes may be given in various ways, but in all his cases Mossé had them baked. In his experiments usually from 1 to 1.5 kilos of potatoes were substituted for about 350 to 500 grammes of bread. After the potatoes were substituted there was always a definite drop in the curves representing the urine and sugar excretion. In none of his cases did the sugar entirely disappear. Mossé states [that there was also a marked amelioration in the patient's symptoms. The thirst became less, neuralgias disappeared, and the strength increased. He found that after potatoes had been substituted for bread for several days, and then the patient placed on the original amount of bread, the excretion of sugar never reached the limit attained previous to the potato régime. The writer consequently holds that a potato diet has a similar beneficial effect to the "hunger-day" of Naunyn.

Good results have followed the use of the potato régime in not only the mild, but also the severe forms of diabetes. Mossé claims that traumatic wounds and those following surgical operations heal much more rapidly on a potato diet, and cites cases attempting to demonstrate this view.

Mossé advances two hypotheses to explain the beneficial effect of the potato diet. The first is that the potato produces a sugar more easily warehoused than that produced from bread; and second, that it introduces a substance into the organism which favours the glycolytic function of the

body. The diminution in the thirst is attributed to the greater amount of water contained in the potatoes. The increased glycolysis is believed by the writer to be due to the much greater quantity of potash introduced into the system as a result of the potato diet.

From the series of charts published it seems quite certain that potatoes are better tolerated by diabetics than wheat bread.—*Amer. Jour. of Med. Sci.*, May, 1903.

III. THE TREATMENT OF ASTHMA IN CHILDHOOD.

In a paper on this subject Dr. Stanley (Birmingham) calls attention to the value of *grindelia robusta*. He writes:—The treatment of asthma in children cannot be considered satisfactory, though occasionally some very good results may be obtained, and every case must be considered as a law unto itself. That *grindelia robusta* may give great relief I am convinced, but it may fail completely. In any case it should be given a trial if other methods do not relieve the attacks. There seems little indication as to what case is most likely to benefit by *grindelia*: those in which I have had the best results have shown considerable emphysema. It is administered in doses of 15 to 20 minims every quarter of an hour for four or five doses. Comby, who has had extensive experience in the treatment of spasmodic asthma in children, recommends a mixture containing tinctures of belladonna, drosera, lobelia, *grindelia*, and aconite. Drosera is a little-known drug in this country, and I have not tried it. Iodide in large doses is recommended, but I do not think children can stand it well. Probably much of the treatment of asthma in children depends on how far their surroundings and constitutional tendencies can be controlled. A thorough hygiene is of the utmost importance, and the antecedents must be carefully investigated. If we under-estimate the importance of this general principle, the management of these cases will be unsatisfactory. The patient may completely recover under careful and thorough treatment: therefore it is well worth while to attend to every detail. Change of climate for a time may be necessary, and every precaution taken to prevent catarrhal attacks in those who have shown evidence of spasmodic asthma: country or sea air should always be

tried. Gouty family histories must be always borne in mind in dieting these cases. In fact, the digestive system should in many cases receive first attention; the last meal of the day must be of the lightest possible nature. *Birmingham Med. Review*, Feb., 1903.

IV. THE TREATMENT OF TYPHOID FEVER BY ACETOZONE.

Dr. F. G. Harris has tried this remedy in 128 instances of typhoid fever in the Cook County Hospital, taking advantage of a recent epidemic of typhoid, during which at least 600 patients with typhoid fever were admitted to the wards between July 1 and November 1, 1902. The cases were not selected ones, and special wards were set apart for giving the acetozone treatment. As is well known, acetozone was first prepared by Noxy, and its action is similar to that of hydrogen dioxide, save that it gives off more active oxygen than the former compound; but while giving off more active oxygen, it does not do so with the same violence and rapidity as is observed with hydrogen dioxide. This drug was administered in solution which contained 12 to 15 grains of the powdered acetozone to a quart of hot water. This is placed in a bottle which is stoppered and vigorously shaken from three to five minutes. It is then set aside to cool, and is kept in the form of one-half-gallon bottles in a refrigerator. The solution is used to replace water and all other liquids except milk, which is practically the entire food used during the persistence of the fever. The patients are urged to drink it *ad libitum*. Moreover, 6 ounce-doses of this solution are given every four to six hours during the course of the fever. Apart from small doses of sodium phosphate or potassium sulphate to move the bowels, this was the only medication. Temperatures above 102° F. were treated by sponging with cold water. In conclusion, the author stated that many patients were given acetozone very irregularly on account of several contributory causes: Dislike of the taste and odour of the solution; resistance of ignorant patients; lack of assistance on the part of overworked attendants, due to the crowded wards caused by the epidemic. Those patients who are given the drug early, often, and regularly show the best results of this treatment. What Virchow calls the

"brutal force of figures" cannot but convince anyone that acetozone lowers the temperature, shortens the duration of the fever, and lessens its toxic symptoms more than our better known treatments. From the information gained in watching this series of 128 instances of typhoid fever, he believes that where patients can be seen during the first week of the illness and given large amounts of acetozone solution regularly and often, assisted by a gentle laxative, the temperature will return to the normal in from ten to twelve days.—*Therapeutic Gazette*, 1903. No. 3, p. 145, and *Amer. Jour. of Med. Sci.*, June, 1903.

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V. EXPERIMENTS IN LOCAL TREATMENT.

Bouchard made an interesting communication at the recent Medical Congress in Cairo, on the effect of administering drugs locally in cases where a general infection tends to become localised. In a case of acute rheumatism, a man of sixty kilos, receiving 6 grms. of sodium salicylate daily, is taking 10 cgrms. for each kilo of tissue, whether it be sound or diseased. But the soft part of the joint, which is the real seat of the disease, will only weigh 50 to 100 grms., so that the amount which actually cures the local affection is some 5 to 10 mgrms. But to obtain this it has been necessary to absorb 599 times the amount required. As a matter of fact, acute rheumatic arthritis yields to extremely minute amounts of sodium salicylate if it be injected locally. Bouchard has seen the arthritis cut short by the injection of 3 cgrms., and it is exceptional if a rheumatic arthritis is not cured by the local injection of 10 to 20 cgrms. dissolved in 2 to 4 c.c. of water. The effect is not due to simple revulsion, as in that concentration the solution is not irritating; nor is it due to abstraction of fluid, since the effect is obtained even if the salicylate solution be isotonic and have the same osmotic tension as the blood. In a series of cases of acute rheumatic polyarthritis, Bouchard has seen 5 to 10 cgrms. of sodium salicylate cause disappearance of the swelling, redness, and pain in the joint treated, while the other joints involved were not benefited, and other joints or serous membranes may be subsequently attacked. Thus, one can at will cure any one joint. The effect is purely local, and is not due to absorption

into the blood or to nervous influence. The local treatment is uncertain, as it does not prevent the further spread of the disease to other joints or serous membranes. Consequently, during the acute stage of rheumatism, or if it be of a wandering type, general treatment is obligatory. If it fails, then local injection may be used. When the rheumatism is past the progressive stage, and no longer exists as a general infection, but merely leaves local manifestations, the local joint treatment may of itself prove sufficient. Similarly, the injection of minimal doses of sodium salicylate into the painful chest wall has cut short the development of pleurisy, and pericarditis has thus been cured. The injection should be made in immediate proximity to the affected structures, but not into the joints or serous cavities themselves, but in the surrounding tissue, or even into diseased tissue itself. For the local treatment of syphilitic manifestations, Bouchard has used the following formula with great success :—Biniodide of mercury, 0.01 grm.; potass. iod., 3 grms.; water, 100 c.c. Of this, 2 c.c. are injected locally. It is also very effectual in relieving the pains of locomotor ataxia.—*Rev. moderne*, Paris, January, 1903, and *Ed. Med. Jour.*, May, 1903.

VI. OLIVE OIL IN GASTRIC ULCER.

Walko (K.). *Centralblatt für inn. Med.*, 1902. Vol. XXIII., p. 1,113. Olive oil meets admirably the various therapeutic indications in gastric ulcer; it is non-irritant, it possesses high nutritive value, it is well absorbed, it exerts no deleterious influence on the motility of the stomach, it does not encourage bacterial decomposition in cases with stasis. As a fat it possesses the power of diminishing the hydrochloric acid secretion. It tends to regulate the action of the bowels, it may form a protective covering to the ulcer, and, lastly, it is anti-spasmodic. On these grounds the writer has employed olive oil in the treatment of gastric ulcer, and with success. In acute cases the oil is given at first in teaspoonful doses, and gradually increased until about two ounces are taken three times a day. Along with rectal feeding, the patient is kept on oil until the acute symptoms have subsided (3-6 days). Where the oil is distasteful an aromatic mouth-wash may be used after each dose, or in obstinate cases the

oil is given as an emulsion through a soft tube. The average period over which oil is used is about 14 days, other dietetic ingredients being gradually added until at the end of the first week the patient is taking Leube's No. 1 diet.—*Med. Chronicle*, June, 1903.

VII. ON APOMORPHIN.

Professor S. Rabow publishes a paper in v. Leyden-Festschrift. Bd. II. P. 79. He states that under the influence of microbic activity a little of it is sometimes formed in old solutions of morphin; hence may result some of the cases of vomiting that occur after hypodermic injections of morphin. For medical purposes apomorphin hydrochloride is exclusively used. When this salt is kept in solution after a while the solution may become clear green in colour; this change has no effect on the activity of the drug, and is probably brought about in the following way:—The glass of the bottle in which the solution stands gives up some alkali to the solution, which by uniting with some HCl causes some basic apomorphin to be set free: in presence of air this is oxidised into substances having a green colour. The green coloration may be prevented by adding a little HCl to the solution.

After discussing its well-known uses as an emetic and expectorant, Rabow calls attention to its action as a hypnotic. Given hypodermically in doses of grain $\frac{1}{20}$ — $\frac{1}{30}$ it acts promptly in producing sleep. In cases of excitement in which the patient was inclined to throw himself about, and to be violent, and had suicidal impulses, he found it an excellent means of producing rest and sleep; the sleep produced is deep, and lasts a long time. It is to be avoided in the case of weakly and emaciated invalids, of children, and of aged persons. Vomiting sometimes occurred, but after it the patients slept quietly.—*Deutsche med. Zeitung*, Aug. 18, 1902.

VIII. GLYCOSURIA WITHOUT AN EXCESSIVE AMOUNT OF SUGAR IN THE BLOOD.

Dr. R. Lépine contributes to the *Lyon Médical*, 47, 1902, a paper on the above subject. He objects to the expression "Renal Diabetes," and prefers to express his views by stating that there may be a "renal element" in diabetes. The view

of Claud Bernard that sugar only appears in the urine when its percentage in the blood exceeds 0.03 per cent. was, in 1895, disproved by Lépine's experiment. He ligatured the ureters of a dog, and then injected sugar into a vein in the proportion of 3 grams to each kilogram of the animal's weight; at first the amount of sugar in the blood exceeds the normal, but after 6 or 7 hours it falls below the normal; nevertheless the urine still contains sugar. Another experimental method will produce the same result: a puncture with a needle into the cervical cord in the neighbourhood of the calamus scriptorius produces hypoglykæmia, which in one case was accompanied by glycosuria.

Lépine believes that transitory attacks of glycosuria are of nervous origin; and does not believe that in these cases there is any hyperglykæmia. He mentions the case of alternating albuminuria and glycosuria in a hysterical woman, in whom there was clearly neither Bright's disease nor true diabetes—probably the condition was due to a functional alteration in the renal activity.—*Deutsche med. Zeitung*, May 18, 1903.

IX. ORTHOFORM IN THE DIAGNOSIS OF GASTRIC ULCER.

Dr. Murdoch (*New York Med. Journ.*, November 29, 1902) refers to the great value of the drug in this connection. It is practically non-toxic, sixty grains in a day producing no toxic symptoms, and its influence is decided and prolonged, lasting, on account of its slow solution and consequent non-absorption, for many hours as a local anæsthetic. It will not, however, anæsthetise nerve endings when they are protected by skin or mucous membrane; if therefore its administration in a suspected case of ulcer results in the relief of the severe pain in the stomach, it can only do so by coming into contact with a surface from which the mucous membrane has been removed, and therefore suggests the presence of ulceration.—*Quarterly Med. Jour.*, May, 1903.

X. THE BACTERIOLOGY OF EMPYEMA IN CHILDREN.

W. J. S. Bythell (*The Medical Chronicle*, Nov., 1902, p. 81) presents a study of forty consecutive cases of empyema, the object of which was to determine not only the species

of bacteria present, together with their source and path of infection, but also the part played by the bacteriology in influencing the clinical course and termination of the disease.

While common in children of all ages (ten months to eleven years), fully twice as many boys as girls were affected. The pleura is infected in the great majority of cases by a process of direct invasion from a pulmonary lesion, which in children is usually a catarrhal pneumonia. In many cases which are apparently primary the source of infection is probably also an undiscovered patch of broncho-pneumonia. The micro-organism by far most frequently present is the pneumococcus, which occurred in pure culture in 26 out of 40 cases. The streptococcus alone occurred in two cases, while one or other of these organisms was present in every case except one, in which was found Friedländer's bacillus and the *Staphylococcus albus*.

The clinical results of empyema depend to some extent upon the species of bacteria found within the pleura, the pneumococcic cases being, on the whole, the mildest. This micro-organism may, however, give rise to very serious complications, either by direct invasion of surrounding viscera or by metastatic infection.

The bacteriological examination of the pus gives other indications as to the clinical prognosis which appear to be of considerable value: (a) A small number of poorly-stained micro-organisms which give feeble cultures usually denotes a good prognosis; (b) the reverse condition is not so frequently accompanied by severe clinical symptoms, especially when phagocytosis is well marked; (c) vigorous cultures are not in themselves a reliable sign of pathogenic activity.

The bronchial glands are probably invaded by micro-organisms from the pleural cavity in every case. The organisms are sometimes also found after death in the mesenteric glands.

With the exception of those cases in which there are tuberculous lesions of the pleura or lung, the best results may be expected from the resection of a rib with free drainage. In cases in which a tuberculous origin is suspected, removal of the fluid by paracentesis is to be preferred, and especially when the lungs are the seat of tuberculosis. Free drainage in these cases

probably offers no better chance of cure than repeated aspiration, and the complete evacuation of the fluid by free drainage appears to accelerate the pulmonary lesion by removing the pressure upon the lung, while the prolonged use of a drainage tube greatly increases the danger of contamination from within.—*Amer. Jour. of Med. Sci.*, April, 1903.

CORK MEDICAL AND SURGICAL SOCIETY.

THE Annual General Meeting was held on Wednesday evening, May 27, 1903, P. T. O'Sullivan, M.D., President, in the chair. Dr. P. J. O'Brien, Hon. Treasurer, read the statement of accounts, which showed that the credit balance of £12 with which the session had opened had now increased to £68. The statement and balance sheet were adopted on the motion of Dr. T. G. Atkins, seconded by Dr. J. Cotter, both of whom congratulated the members on the flourishing condition of the Society. The following officers were elected for the coming session:—President—J. Cotter, M.D., F.R.C.S.I.; Vice-President—N. Henry Hobart, B.A., M.B., M.R.C.S. Eng.; Hon. Sec.—D. J. O'Connor, M.A., M.D., L.R.C.P.I.; Hon. Treasurer—P. J. O'Brien, M.B.; Council—P. T. O'Sullivan, M.D. (Retiring President); C. Y. Pearson, M.D., F.R.C.S. Eng.; W. Ashley Cummins, M.D.; T. G. Atkins, B.A., M.D.; H. R. Townsend, B.A., M.D.; Edmond Murphy, L.R.C.P. & S.I.; Philip G. Lee, L.R.C.P. & S.I.; and Lucy Smith, M.D. Dr. N. J. Hobart, who has retired from active practice after a professional career of fifty-seven years, was unanimously elected an honorary life member of the Society.

UNIVERSITY OF DUBLIN.

THE Senate met in the Theatre of Trinity College, Dublin, on Tuesday, June 9th, 1903, for the purpose of considering names proposed by the Board for Honorary Degrees, and also for the discussion of the following Resolution:—"That it is desirable that Degrees in the University of Trinity College, Dublin, shall be opened to women, and that His Majesty's Government be requested to obtain a King's Letter empowering the University to grant Degrees to Women on such terms and conditions as may seem to the Board and Council, within their respective provinces, on full consideration, to be most expedient." After a long discussion the resolution was adopted by 74 to 11 votes.

PART IV.

MEDICAL MISCELLANY.

Reports, Transactions, and Scientific Intelligence.

THE HOUSING OF THE PEOPLE OF IRELAND DURING THE PERIOD 1841-1901.^a

By ROBERT E. MATHESON, Esq., LL.D., Barrister-at-Law ; Registrar-General for Ireland.

I PURPOSE presenting to the Society a short review of the results of the inquiries made at each successive decennial Census from 1841, into the class of houses in Ireland, and the accommodation afforded by them, with some observations regarding the results of the special investigation into the number of tenements of less than five rooms made in connection with the Census of 1901.

CLASSIFICATION OF HOUSES.

An inquiry into the number of houses in Ireland was instituted both in 1821 and 1831, in connection with the Census, but no attempt was made to ascertain the class of houses returned, or the accommodation afforded. The Commissioners of 1841 perceived the necessity for some effort in this direction, and framed a scheme of House Classification which has since been adopted at each successive Census.^b The plan of classification may be thus described :—

The value or condition of a house, as to its quality, may be considered to depend mainly on :—

- 1st. Its extent, as shown by the number of rooms ;
- 2nd. Its quality, as shown by the number of its windows ; and
- 3rd. Its solidity or durability, as shown by the material of its walls and roof.

If numbers be adopted to express the position of every house in

^a Read before the Statistical and Social Inquiry Society of Ireland, June 5, 1903, the President, Mr. Wm. F. Bailey, in the chair.

^b As in the Census Tables for 1871, the classification adopted on previous occasions was departed from to a certain extent, the figures for that year have been omitted from this paper, they not being fairly comparable with those for preceding and subsequent Censuses.

a scale of each of these elements, and if the numbers thus obtained for every house be added together, a new series of numbers will be produced, giving the position of each house in a scale compounded of all the elements—*i.e.*, their actual state.

Four classes have been adopted, and the result is, that in the lowest of the four classes are comprised houses built of mud or perishable material, having only one room and window; in the third a better description of house, varying from one to four rooms and windows; in the second what might be considered a good farm house, having from five to nine rooms and windows; and in the first class all houses of a better description than the preceding.

Houses—Whole of Ireland.—During the 60 years from 1841 to 1901, there was a gradual reduction in the total number of houses—a result to have been anticipated from the reduction of the population—the number of houses having fallen from 1,328,839 in 1841 to 858,158 in 1901.

There was also a great alteration in the relative number of the houses of each class. Thus, in 1841 the fourth class, or mud cabins, which in that year numbered 491,278, formed 36.97 per cent. of the total number of houses. In 1851 the number fell to 135,589, and the percentage to 12.96, and since then there has been a gradual decline until, in 1901, we find that of inhabited houses in Ireland there were only 9,873, or 1.15 per cent., belonging to the fourth class.

In considering this decline it must be borne in mind that in this period Ireland passed through one of the saddest epochs in her history—the years of the terrible Famine, occasioned by the failure of the potato crop, accompanied and succeeded by the fever and pestilence which proved so fatal to the poor inhabitants of these cabins. Everywhere throughout the West and South of Ireland vast numbers of these wretched little habitations were left desolate, the inmates having either perished from the famine or the fever, or sought refuge from their misery in emigration.

Of houses of the third class there were, in 1841, 533,297, being 40.13 per cent. of the total number of inhabited houses in that year. In 1851 the number rose to 541,712, or 51.78 per cent. of the total. In 1861 the number of houses of this class fell to 489,668, and the percentage to 49.20, since which date each Census shows a further decline. At the date of the last enumeration, the number of houses of this class was 251,606, being 29.32 per cent. of the total number of inhabited houses in the country.

Notwithstanding the great decline in the population, the number of the second class houses gradually increased from 264,184, or 19.88 per cent. of the total number of inhabited houses in 1841, to 521,454, or 60.76 per cent., in 1901.

The first class houses, which in 1841 numbered only 40,080, or 3.02 per cent., had risen in 1901 to 75,225, or 8.77 per cent. of the total number of inhabited houses.

HOUSES IN CIVIC DISTRICTS AND RURAL DISTRICTS.

It has been customary in each Census to show the houses by Civic and Rural Districts, the former consisting of towns with 2,000 or more inhabitants, and the Rural Districts comprising all other parts of the country.

Civic Districts.—The total number of inhabited houses in Civic Districts, which in 1841 was 151,381, showed an increase at each successive Census (1851 excepted) till 1901, when it reached 231,112.

In 1841 the houses of the fourth class in these districts numbered 20,729, or 13.69 per cent. of the total number of inhabited houses. In 1851 they fell to 4,833, or 3.22 per cent.; in 1861 to 3,581, or 2.23 per cent.; and they continued to decrease till 1901, when they were only 527, or 0.23 per cent. of the inhabited houses.

Of third class houses in 1841 there were 40,488, or 26.75 per cent. of the total inhabited houses. There was a slight increase in 1851, when they were 40,955, or 27.31 per cent. They have decreased at each Census since that date. In 1861 the number was 38,943, or 24.32 per cent.; in 1881, 32,143, or 17.01 per cent.; in 1891, 26,137, or 13.03 per cent.; while in 1901 it fell to 22,268, or 9.64 per cent.

There were 66,062 second class houses in Civic Districts in 1841, representing 43.64 per cent. of the total inhabited houses in these districts. This number increased to 76,243, or 50.83 per cent., in 1851. In 1861 it rose to 88,037, or 54.97 per cent. In 1881 houses of this class numbered 121,707, or 64.39 per cent.; in 1891 they amounted to 139,909, or 69.76 per cent.; and at the last Census, 1901, they reached 171,792, or 74.33 per cent.

Houses of the first class in Civic Districts show a continuous rise in number at each Census during the period 1841–1901. In 1841 they numbered 24,102, or 15.92 per cent. of the total number of inhabited houses; while in 1901 the number stood at 36,525, representing a percentage of 15.80.

Rural Districts.—The total number of inhabited houses in Rural

Districts shows a continuous decrease at each Census from 1841 to 1901. In the former year 1,177,458 inhabited houses were enumerated, in 1851 the number fell to 896,237, in 1861 to 835,001, and in 1881 to 725,111. There was a further decrease in 1891 to 670,017, and in 1901 to 627,046.

The inhabited houses of the fourth class in Rural Districts in 1841 numbered 470,549, or 39.96 per cent. of the total inhabited houses. They fell in 1851 to 130,756, or 14.59 per cent. ; in 1861 to 85,793, or 10.28 per cent. ; in 1881 to 38,804, or 5.35 per cent. In 1891 the number had fallen to 19,761, or 2.95 per cent. ; and in 1901 it was only 9,346, or 1.49 per cent.

In 1841 there were 492,809 houses of the third class in Rural Districts, representing 41.85 per cent. of the total inhabited houses in such districts. In 1851 the number rose to 500,757, or 55.87 per cent. of the total. Each subsequent Census showed a decrease, and in 1901 the number had fallen to 229,338, or 36.58 per cent. of the total.

Houses of the second class show a continuous increase from 1841 to 1901. In 1841 they were 198,122, or 16.83 per cent. of all the inhabited houses. In 1851 the percentage rose to 27.06, in 1861 to 32.65, in 1881 to 41.45, and in 1891 to 48.76. In 1901 the number of houses of this class was 349,662, or 56 of every 100 houses of all classes.

First class houses in Rural Districts in 1841 numbered 15,978, or 1.36 per cent. Notwithstanding the decrease in the population, the number and percentage of these houses increased at each successive Census, till in 1901 they were 38,700, or 6.17 per cent. of the total inhabited houses. The percentages for the years 1851, 1861, 1881, and 1891 were respectively 2.48, 3.09, 4.61, and 5.54.

HOUSE ACCOMMODATION.

I now pass to the second branch of my subject—viz., house accommodation.

In connection with their scheme of house classification, the Commissioners for taking the Census of 1841 devised an arrangement for classifying house accommodation, which has been adopted since that date.^a Under this plan the accommodation has been arranged under four classes, viz. :—

First class accommodation consisting of first class houses, occupied by one family.¶

^a See note (b) on page 52.

Second class accommodation, consisting of second class houses occupied by one family, or of first class houses occupied by two or three families.

Third class accommodation, comprising third class houses with one family each, or second class houses with two or three families, or first class houses occupied by four or five families.

Fourth class accommodation, includes all fourth class houses, third class houses with more than one family, second class houses with four or more families, and first class houses inhabited by six or more families.

Whole of Ireland.—In 1841 the number of families having only fourth class accommodation formed 42.46 per cent. of the total number of families in the country. In 1851 the percentage fell to 23.60, and in 1861 to 17.46. In 1901 the percentage of families having fourth class accommodation was only 4.53, or little more than one-tenth of the percentage in 1841.

In 1841 the percentage of families having third class accommodation was 39.00. This rose in 1851 to 48.86, and in 1861 to 49.06, since which date it has shown a decline. In 1901 the percentage was 31.64.

There has been a steady increase in the proportional number of families having accommodation of the second class in the period 1841–1901. Thus, in 1841 only 16.41 per cent. of the total number of families had second class accommodation, while the percentage rose to 24.27 in 1851, and to 29.55 in 1861. In 1881 it was 40.59, and in 1901, 56.37.

Again, while in 1841 the percentage of families enjoying first class accommodation was only 2.13, the relative figure rose gradually till in 1901 it reached 7.46 per cent.

Civic Districts.—Turning to the house accommodation in Civic Districts, we find that the number of families having only fourth class accommodation was, in 1841, 86,067, or 36.67 per cent. of the total number of families, and that the percentage gradually diminished, till in 1901 the number of families with accommodation of the lowest class was 29,354, the percentage being 10.58, or little more than one-fourth of the percentage in 1841.

The number of families having accommodation of the third class in 1841 was 79,545, or 33.89 per cent. This percentage increased in 1851 to 35.89, and in 1861 to 37.16. In 1881 it had fallen to 31.78, and in 1901 it was only 19.32—the decline in the later periods is, happily, due to an increase in the relative number of families having second class accommodation.

In 1841, 52,526 families, or 22.38 per cent., had accommodation of the second class. This percentage has steadily increased, and in 1901 it reached 59.21.

The percentage of families in the Civic Districts occupying first class accommodation rose materially during the period 1841–1901. In 1841 it was 7.06, while in 1901 it had risen to 10.89.

Rural Districts.—In the Rural Districts of Ireland, in 1841, 539,289 families, or 43.56 per cent. of the families in those districts, had but fourth class accommodation. In 1851 the percentage had fallen to 21.77, in 1861 it was but 15.16, in 1881 it further declined to 6.66 per cent., and in 1891 to 3.70. The percentage in 1901 was only 1.88, or less than one-twentieth of the percentage in 1841.

In 1841, in the Rural Districts, there were 494,841 families with third class accommodation, being 39.97 per cent. of the total number of families in those districts in that year. In 1851 the corresponding percentage rose to 52.11, and in 1861 to 52.40, while in 1881 it fell to 48.94, in 1891 to 43.31, and in 1901 to 37.04. Here, as in the Civic Districts, the decrease in the later years was accompanied by an increase in the percentage of families having second class accommodation.

There were only 15.28 per cent. of the families in Rural Districts in 1841 who had second class house accommodation (the actual number of such families being 189,138). In 1851 the percentage had risen to 24.01, in 1861 it rose to 29.70, in 1881 to 40.07, in 1891 to 47.74, and in 1901 to 55.12, or nearly quadruple the percentage in 1841.

In the Rural Districts of Ireland in 1841 there were only 14,768 families who enjoyed first class house accommodation, this number representing only 1.19 per cent. of the total number of families in those districts. In 1851 the percentage was 2.11, and it further rose to 2.74 in 1861, to 4.33 in 1881, to 5.25 in 1891, and to 5.96 in 1901, being five times the percentage of families having first class accommodation in the Rural Districts in 1841.

Analysing the returns for the Rural Districts in 1901 by counties, it is found that the percentage of families having first class accommodation in Ireland in 1901 ranged from 2.3 for Mayo to 13.7 for Dublin.

The families having second or third class accommodation formed 92.1 per cent. of the total number of families in the Rural Districts, the range of variation in the several counties being only from 82.9 per cent. for Dublin to 95.6 for Mayo.

The county percentages for fourth class accommodation ranged from 0.5 for Down to 5.3 for Kerry.

I have constructed a series of maps, shaded so as to illustrate the changes which have taken place since 1841 in the percentage of families having fourth class accommodation in the Rural Districts of the several counties. These maps I have now the honour to submit to the Society.

It will be observed from the map for 1841 that, in the whole of the western half of the country the families having fourth class accommodation formed 40 or more per cent. of the total number of families in the Rural Districts in that year, and that, with the exception of the Counties of Down, Dublin, and Wexford, in which the percentage ranged between 20 and 30, in the whole of the rest of the country the families having only fourth class accommodation formed from 30 to 40 per cent. of the total number of families.

An inspection of the map for 1861 shows a great improvement, there being only one county—Kerry—in which the percentage of families having fourth class accommodation amounted to 30 per cent. of the total families. In Mayo, Limerick, Tipperary, Cork, and Meath the percentage ranged between 20 and 30 ; in nine counties it was from 15 to 20 ; in eleven it was from 10 to under 15 ; while in six it did not reach 10.

The map exhibiting the state of things twenty years later than the preceding—that is, in 1881—shows a further great improvement, there being only two counties—Kerry and Limerick—in which the percentage of families having fourth class accommodation reached 10. In twenty-two counties the percentage ranged between 5 and 10, and in the remaining eight it was under 5.

Passing over another period of twenty years, bringing us practically down to the present time, the map for the year 1901 shows a marked improvement when compared with that for 1881, as the highest percentage of families having accommodation of the fourth class was 5.3 only, and this was confined to one county—Kerry—the percentage for all the other counties being less than 5. In eighteen of these it was less than 2 ; and in one—Down—it was only 0.5.

ENUMERATION OF TENEMENTS OF LESS THAN FIVE ROOMS.

I now pass to the subject of tenements of less than five rooms, the enumeration of which formed the special feature of the house accommodation portion of the Census of 1901.

The total number of occupiers of such tenements in Ireland in 1901 was 682,434, or 75.0 per cent. of the total number of families in the country, and of these, 361 were occupiers of part of a room only; 78,988, or 8.7 per cent. of all families, were occupiers of one room; 242,710, or 26.7 per cent., occupiers of two rooms; 224,769, or 24.7 per cent., occupiers of three rooms; and 135,606, or 14.9 per cent., occupiers of four rooms.

The number of occupiers of less than five rooms in the Province of Leinster was 176,872, or 73.9 per cent. of the number of families in the province, and of these, 176 were occupiers of but a part of a room, 33,499 were in one room tenements, 58,144 had two rooms, 52,164 were occupiers of three rooms, and 32,889 occupied four rooms.

In Munster the number of tenements of less than five rooms was 157,910, or 77.1 per cent. of the families in the Province, the distribution being as follows:—Part of a room, 132; one room, 17,920; two rooms, 54,130; three rooms, 52,303; and four rooms, 33,425.

In Ulster the number of occupiers of less than five rooms was 233,574, or 70.0 per cent. of the total number of families in the Province—this number being composed of 29 cases where the occupier had but part of a room, 17,176 single room tenements, 82,893 cases of two rooms, 73,211 tenements of three rooms, and 60,265 where there were four rooms in the tenement.

The number of occupiers with less than five rooms in Connaught was 114,078, or 89.5 per cent. of the total number of families in the Province—the 114,078 tenements consisting of 24 cases in which the occupier had but part of a room; 10,393 tenements of one room; 47,543 two room tenements; 47,091 tenements of three rooms; and 9,027 cases where there were four rooms in the tenement.

From these figures we deduce the fact that in Ulster the tenements occupied by 30 per cent. of the families in the Province consisted of five or more rooms, and that the corresponding percentage in Leinster was 26.1, in Munster 22.9, and in Connaught 10.5, only or little more than one-third of the percentage for Ulster.

TENEMENTS OF ONE ROOM.

The most interesting statistics in connection with the enumeration of tenements of less than five rooms are those showing the number of occupants of tenements of one room.

The total number of such tenements in Ireland in 1901 was

79,149. Of these there were 20,994 cases in which the room had but one occupant ; 41,918 where the room had two, three, or four occupants ; 13,351 in which there were five, six, or seven occupants ; and 2,886 in which there were eight or more occupants, including 786 cases of nine persons, 364 of ten persons, 138 of eleven persons, and 68 of twelve or more persons in the room. The total number of cases in which there were five or more persons in the room was 16,237, and the number of persons inhabiting such rooms was 101,845, or 2.3 per cent. of the total population of the country.

In the Province of Leinster the total number of tenements of one room was 33,576. There were 7,562 cases in which one person occupied the room ; 18,910 cases in which the occupants numbered two, three, or four persons ; 6,184 cases in which they numbered five, six, or seven persons ; and 920 cases in which they numbered eight or more persons. These last included 544 cases where the room was occupied by eight persons ; 245 where it was tenanted by nine persons ; 91 where it was tenanted by ten persons ; 28 cases where the occupants numbered 11 persons ; and 12 cases of 12 or more persons in the room.

The total number of cases in the Province in which the room was inhabited by five or more persons was 7,104, and the number of persons in these families was 43,085, or 3.74 per cent. of the total population of the Province.

In the Province of Munster the total number of one room tenements was 17,979. In 4,895 of these tenements the room was occupied by one person only. There were 9,439 cases where it was occupied by two, three, or four persons ; 2,874 cases where the occupants numbered five, six, or seven persons ; and 771 cases where they numbered eight or more persons, including 368 cases of occupation by eight persons, 225 by nine persons, 104 by ten persons, 39 by eleven persons, and 35 by twelve or more persons. The cases where there were five or more persons in the room numbered 3,645, and these families consisted of 23,459 persons, or 2.18 per cent. of the population of the Province.

There were 17,189 one room tenements in the Province of Ulster—viz., 5,706 cases where the room was in the occupation of one person ; 8,395 where there were two, three, or four occupants ; 2,479 cases in which the occupants numbered five, six, or seven persons ; and 609 where they numbered eight or more persons. The last number was composed of 317 cases of eight persons ; 164 cases of nine persons ; 78 cases of ten persons ; 37 cases of eleven persons ; and 13 cases in which the occupants

numbered twelve or more persons. The number of cases in which the room was occupied by five or more persons was 3,088, and the persons forming these families numbered 19,623, or 1.24 per cent, of the total population of the Province.

In the Province of Connaught the number of one-room tenements was 10,405. This total was composed of 2,831 cases where one person was in occupation of the tenement ; 5,174 where there were two, three, or four persons ; 1,814 where there were five, six, or seven persons ; and 586 cases where there were eight or more occupants of the room, including 301 cases of occupation by eight persons, 152 by nine persons, 91 by ten persons, 34 by eleven persons, and eight by twelve or more persons. The cases in which there were five or more persons in the room numbered 2,400, and the occupants numbered 15,678, or 2.42 per cent. of the population of the Province.

COMPARATIVE STATISTICS FOR ENGLAND AND SCOTLAND.

It is, unfortunately, impossible to compare the figures for Ireland in 1901 with previous statistics, as the recent Census was the first in which inquiry into the number of occupants of tenements of less than five rooms was made. A comparison can, however, be instituted for the whole country in 1901, with similar returns for England and Scotland.

The number of tenements of one room in England and Wales in 1901 was 251,667, or 3.6 per cent. of the total number of tenements. Of these, 107,819 were occupied by one person ; 77,179 by two persons ; 55,813 by three or four persons ; and 10,856, or 0.15 per cent. of all tenements by five or more persons—the occupants of these 10,856 rooms numbering 60,044, or 0.18 per cent. of the total population.

The number of tenements of one room in Scotland in 1901 was 169,798, or 17.5 per cent. of the total number of tenements. These comprised 45,266 cases of tenements occupied by one person ; 41,279 cases of two occupants ; 51,700 where three or four persons were in occupation ; and 31,553, or 3.27 per cent. of the total number of tenements of all classes, where the occupants numbered five or more. The total number of persons in the last group was 188,049, or 4.20 per cent. of the total population of the country.

Comparing these figures we find that, as regards the percentage of the tenements of all classes, which were one room tenements occupied by five or more persons, the three countries stand thus—

			Percentage
England	..	..	0.15
Scotland	..	..	3.27
Ireland	..	..	1.78

The actual state of things in each country will be more evident if we compare the number of persons in the one room tenements, having five or more occupants, with the total population of all classes.

We find that in England, of a total population of 32,527,843, there were only 60,043 persons, or 0.18 per cent., who were inhabitants of one room tenements having five or more occupants each. In Ireland the corresponding percentage was 2.28, and in Scotland 4.20.

TENEMENTS OF ONE ROOM IN THE SIX COUNTY BOROUGHES OF IRELAND.

I shall now refer to the one room tenements in the six County Boroughs of Ireland.

In Dublin, of the total number of 59,263 families, 21,747, or 36.70 per cent., were located in one room tenements. -

In 3,278 of these cases, or 5.53 per cent. of the total number of families, the family consisted of one person only ; in 5,544, or 9.36 per cent., there were two persons in the family ; in 7,776 cases, or 13.12 per cent., there were three or four persons in the family ; in 4,576, or 7.72 per cent., there were five, six or seven ; and in 573 cases, or 0.97 per cent., the family consisted of eight or more persons each, including 145 of nine persons, 47 of ten persons, 13 with eleven, and 6 in which there were twelve or more occupants of the single room. The total number of persons in the families of five or more persons in one room tenements was 30,837, or 10.61 per cent. of the total population of the city.

The total number of families in Belfast was 69,981, and of these there were only 697, or 1.00 per cent., in tenements of one room. Of the 697 cases there were 307, or 0.44 per cent., in which the family consisted of one person only ; in 190, or 0.27 per cent., there were two persons in the family ; in 140, or 0.20 per cent., there were three or four persons ; and in the remaining 60 cases, or 0.09 per cent., the family consisted of five, six or seven persons. The total number of individuals in the 60 families of five or more persons in one room tenements in Belfast was 334, or only 0.10 per cent. of the total population of the city.

It will be observed that there is a vast disparity between the proportion of one room tenements in Belfast and the corresponding

proportion in Dublin, and that in Belfast there is very little overcrowding in single room tenements.

In Cork, of 15,255 families, 1,620, or 10.62 per cent., were located in tenements of one room; of these 1,620 tenements, 527, or 3.46 per cent. of the tenements of all classes, were occupied by one person; 441, or 2.89 per cent., by two persons; 478, or 3.13 per cent., by three or four persons; 157, or 1.03 per cent., by five, six, or seven persons; and 17, or 0.11 per cent., by eight or more persons—the total number of persons in the one room tenements having five or more occupants each being 1,022, or 1.34 per cent. of the population of the city.

In Londonderry County Borough the number of families inhabiting tenements of one room was 529, or 7.15 per cent.; 131, or 1.77 per cent. of the total number of tenements, were occupied by one person; 193, or 2.61 per cent., by two persons; 165, or 2.23 per cent., by three or four persons; 34, or 0.46 per cent., by five, six, or seven persons; and there were six cases where there were eight or more persons in occupation of the room. The 40 rooms, in each of which there were five or more persons, had 241 occupants, being 0.60 per cent. of the population of the city.

In Limerick, 1,166 families, or 15.80 per cent. of the total number, occupied tenements of one room, including 302 cases, or 4.09 per cent., where there was one occupant; 338, or 4.58 per cent., where there were two occupants; 321, or 4.35 per cent., where there were three or four occupants; 184, or 2.49 per cent., where there were five, six, or seven persons; and 21 cases, or 0.29 per cent., where the number of persons was eight or more. The occupants of the rooms with five or more persons each numbered 1,249, or 3.27 per cent. of the population of the city.

The number of families in Waterford in occupation of one room was 368, or 7.28 per cent. There were 138 cases, or 2.73 per cent., where the family consisted of one person; 109, or 2.16 per cent., where it consisted of two persons; 87, or 1.72 per cent., where there were three or four persons; 30, or 0.59 per cent., where there were five, six, or seven persons; and 4 where there were eight persons or more in the tenement—the total number of occupants of the one room tenements in which there were five or more persons being 204, or 0.76 per cent. of the population of the city.

Comparing the four cities of Cork, Londonderry, Limerick, and Waterford with reference to the subject of overcrowding in one room tenements, and taking those cases in which there were five

or more persons in the room as representing that class, we find that in Limerick it comprised 2.8 per cent. of the total number of families, and 3.27 per cent. of the population of the city ; in Cork, 1.1 per cent. of the families, and 1.34 per cent. of the population ; in Waterford, 0.7 per cent. of the families, and 0.76 per cent. of the population : and in Londonderry, 0.5 per cent. of the families, and 0.60 per cent. of the population, or little more than one-sixth of the corresponding percentage for Limerick.

COMPARATIVE STATISTICS FOR ENGLISH AND SCOTTISH CITIES.

As already stated, there are no previous Irish statistics available on the subject of overcrowding, and, therefore, no comparison can be instituted between the state of things in the six County Boroughs in 1901 and at an earlier date. I have, however, thought it well to bring before the Society the figures relating to this matter for a few cities in England and Scotland.

In London of a total of 1,019,646 tenements, 149,524, or 14.66 per cent. were one room tenements. These consisted of 60,421 cases (or 5.92 per cent. of the total number of London tenements), in which the room was occupied by one person only ; 48,341, or 4.74 per cent. of the total in which there were two occupants in each room ; 34,959 or 3.43 per cent., rooms with three or four occupants each, and 5,803 cases, or 0.57 per cent. in which there were five or more persons in each room, including 161 cases of single room tenements having eight or more occupants. The occupants of the rooms having five or more persons in each numbered 31,615, or 0.70 per cent. of the total population.

In Liverpool the total number of tenements was 138,845. Of these 8,527, or 6.14 per cent. were tenements of one room. The tenements of one room included 2,587 cases (or 1.86 per cent. of the total number of tenements) where the room was occupied by one person ; 3,181 cases, or 2.29 per cent., in which it was occupied by two persons ; 2,457, or 1.77 per cent., in which it was occupied by three or four persons ; and 302, or 0.22 per cent., in which the occupants were five or more in number. In these 302 rooms there were 1,614 persons, being 0.24 per cent. of the total population of the city.

The total number of tenements in Manchester was 112,854. Of this total 2,140, or 1.90 per cent. were tenements of one room. These one room tenements comprised 820 cases, or 0.73 per cent. where the room was occupied by one person ; 870, or 0.77 per cent., where it was occupied by two persons ; 405, or 0.36 per

cent., where the tenants numbered three or four persons : and 45 cases where there were five or more persons in occupation. The number of persons in these 45 rooms was 261, or only 0.65 per cent. of the total population.

Turning to Scotland : In Edinburgh, out of a total of 71,504 tenements of all kinds, 12,144, or 16.98 per cent., were tenements of one room only. An analysis shows that in 4,794 cases, or 6.70 per cent., the room was occupied by one person : in 3,112 cases, or 4.35 per cent., it was inhabited by two persons : in 2,950 instances, or 4.13 per cent., there were three or four persons in occupation : whilst in 1,288 cases, or 1.80 per cent., the occupants numbered five or more persons—the total number of persons in these 1,288 rooms amounting to 7,360, or 2.33 per cent. of the population of Edinburgh.

In Glasgow, where the total number of tenements of all descriptions was 163,258, there were 42,623 tenements, or 26.11 per cent. of one room. These consisted of 8,603 cases, or 5.27 per cent. of the total, in which the room was occupied by one person ; 12,029, or 7.37 per cent., where it was inhabited by two persons ; 15,002 cases, or 9.19 per cent., where it was inhabited by three or four persons ; and 6,989 cases, or 4.28 per cent., where the occupants were five or more in number. The total number of occupants in these 6,989 cases amounted to 39,880, or 5.24 per cent. of the population of the city.

The following statement shows succinctly the relative overcrowding in one-room tenements in the cities above referred to. It will be observed that Dublin occupies the unenviable position of being by far the worst in this respect :—

CITIES	Number of One Room Tenements having five or more occupants each, in every 100 tenements of all classes	Number of Persons in One Room Tenements with five or more occupants in every 100 of the total population
Dublin	.. 8.69	10.61 ^a
Belfast	.. 0.09	0.10
London	.. 0.57	0.70
Liverpool	.. 0.22	0.24
Manchester	.. 0.04	0.05
Edinburgh	.. 1.80	2.33
Glasgow	.. 4.28	5.24

^a As stated, this percentage has reference to the County Borough of Dublin—being the City as extended under the Dublin Corporation Act, 1900. Taking the whole of the Dublin Registration Area—which consists of the City of Dublin and the Urban Districts of Rathmines, Pembroke, Blackrock, and Kingstown—the number of persons in the one-room tenements having five or more occupants in every 100 of the total population was 8.7.

In bringing this paper to a close, I would say that the material improvement in the housing of the people of Ireland since 1841 is very satisfactory, but there is still much to be accomplished.

The substitution of the modern labourers' cottages in the Rural Districts for the mud cabins, formerly so numerous, and the erection of Artisans' Dwellings in some of the larger Urban Districts have done much to provide suitable habitations for the people: but the statistics of tenements of one room show that in many parts of the country a considerable proportion of the population are still exposed to all the evils resulting from overcrowding. The total effacement of fourth class houses and the reduction of the number of cases of families having only fourth class accommodation should be aimed at.

It is gratifying to know that this pressing subject is at present attracting earnest attention in Dublin. The action of the Municipal Council for some years past has resulted in a very considerable change for the better in several parts of the city, and great good has been effected through the princely munificence of Lord Iveagh.

The movement for the improvement of the dwellings of the poor has recently received an important impetus by reason of the great practical interest manifested in it by His Excellency the Lord Lieutenant, who has by personal inspection acquired a full knowledge of the necessities of the case, and it may be confidently hoped that the efforts now being made will, ere long, result in a substantial amelioration of the sad condition of the humbler classes in so far as regards their house accommodation.

In conclusion, I desire to express my warm thanks to Mr. Peter J. O'Neill, Honorary Treasurer of the Society, and one of the Superintendents in my Department, for his very kind aid in the preparation of this paper.

[NOTE.—This paper was illustrated by numerous tables, diagrams, maps, and views shown on the screen.

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A feature to which we desire to draw special attention is that no depressing effect is produced, and the action of the kidneys and liver is not affected.

Numerous favourable reports have been received from members of the Medical Profession, a few of which are appended, and this preparation created great interest at the recent Congress of the British Medical Association.

It is found impossible to get the same result with Colchicum Wine and Salicylic Acid.

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TESTIMONIALS.

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I am, dear Sirs, yours faithfully,

— —, M.R.C.S., ENG.

PLEASLEY, MANSFIELD, *May 18th*, 1893.

GENTLEMEN,—I have much pleasure in testifying to the great benefit I have experienced from the use of your **Liquor Colchicinæ Salicyl** in my own case for lumbago. During the 18 months I have used it (for three separate attacks) it has **not failed me once**. I have always experienced relief within half-an-hour of the time of taking the first dose, and three or four doses have invariably succeeded in subduing the attack, and that without causing any unpleasant effect whatever, or even necessitating confinement indoors. I regard it as a valuable remedy for this and similar complaints. I shall take care to have it by me for personal use, and shall prescribe it to my patients.

Yours faithfully,

— —, M.B., C.M. (Univ. Aberd)

GREAT GRIMSBY.

DR. SMITH would be much obliged if Messrs. Hopkinson & Co. will send him, for his own use, another bottle of **Liquor Colchicinæ Salicyl**. He has derived great benefit from it.

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DEAR SIRS,—I have found your **Liquor Colchicinæ Salicyl** of great value in my own case. I was soon quite relieved from pain, after having been ill for a long time with rheumatic gout. I have prescribed and recommended it to a great many people since, and have heard good results in every case.

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THIS valuable remedy has been before the Medical Profession, and has been much appreciated by them for the past 28 years. It is useful for Dyspepsia, Gastric Distress, Impaired Digestive Powers, and Gastrodynia. It is an elegant compound, very palatable, *retained by the most enfeebled patient*, and has no precipitate. The component parts are on every label—it is no secret formula. Each teaspoonful contains  $1\frac{1}{2}$  minims Acid Hydrocyanic B.P.,  $\frac{1}{32}$  grain Morphia, 6 minims Tinct. Nucis Vom. with Bismuth, in its most efficacious form and Chloroform.

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Is identical with above preparation, with the addition of 2 grains Pure Pepsin Porci in each fluid drachm.

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## Liq. Caulophylli et Pulsatillæ.

Price, 4/6 per lb.

A VALUABLE uterine sedative and tonic in affections of the utero-genital organs.

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## Liq. Euonymi et . . .

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THE well-known laxative properties of Cascara in combination with Euonymin renders this an invaluable preparation in hepatic troubles, and is much esteemed by the profession.

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## SECTION OF OBSTETRICS.

President—W. J. SMYLY, M.D., F.R.C.P.I.  
Sectional Secretary—JOHN H. GLENN, M.D., F.R.C.P.I.

*Friday, April 24, 1903.*

### *Card Specimens.*

DR. W. J. SMYLY exhibited the following card specimens:—  
(a) Two myomatous uteri—No. 1, weighing 9 lbs., removed because of its size and continued growth; No. 2, for pain and pressure on the rectum. (b) Uterus removed for cancer of cervix. (c) Tubes removed for tuberculous disease.

### *Specimens.*

DR. W. J. SMYLY also showed the following specimens:—  
(a) Ovarian papillomata. Patient was first seen on October 18th, 1902. The tumours, which were confounded with the uterus, on bimanual examination were supposed to be myomata. Sent for again on the 28th, the abdomen was then very much distended with ascitic fluid and patient suffering intense pain. Abdominal coeliotomy, October 31st, 1902. The abdominal peritoneum was studded with secondary growths, and the omentum was a mass of disease. The two cystic ovaries, which were universally adherent, were removed with much difficulty, and also the omentum. The patient recovered and is now in the South of France. (b) The patient from whom the specimen was removed was first seen in February, 1901. Though she had long passed the menopause, a sanguineous discharge from the uterus had been going on more or less for two months. Curetting was advised, but declined, and she was not seen again until six weeks ago, when a fungous growth was observed protruding from the os uteri. Vaginal hysterectomy was performed. The operation was a difficult one, owing to the friability of the uterus, but was successfully carried out, and the patient made a good recovery. It is remarkable that an operation

was still possible two years after the probable commencement of the disease. (c) This patient suffered intense distress from pelvic pressure, and, the uterus being found enlarged and retroverted, the symptoms were attributed to the displacement. Abdominal suspension of the uterus by Kelly's method was performed, but owing to obstruction of the bowel the abdomen had to be re-opened, and the cause of the obstruction was found to be an adhesion of the rectum to the cervix, which it had been found impossible to separate at the original operation: the uterus was therefore allowed to return to its former position, and the abdomen closed. Her sufferings continued to be so great that she was obliged to relinquish her employment, and when the removal of the uterus was suggested she readily consented to have the operation performed. About a fortnight ago Dr. Smyly performed a supra-vaginal amputation, and she has made a good convalescence.

DR. LANE showed a large dermoid cyst removed two months after confinement.

DR. PUREFOY showed a specimen of (a) General follicular enlargement of ovary; (b) Rokitanski's tumour of ovary.

#### *Gynæcological Report of the Rotunda Hospital.*

DR. PUREFOY read the gynæcological report of the Rotunda Hospital for the year 1901-2. [It will be found at page 341 of volume CXV.]

The discussion was postponed until the next meeting of the Section.

#### LITERARY NOTE.

MR. HEINEMANN, Bedford-street, London, W.C., has just ready for publication a small volume entitled "Hay Fever and its Successful Treatment." Sections are devoted to the history, causes, time of occurrence, duration, &c., of the disease, and there is an interesting discussion upon the pollen theory of its causation. Its treatment is very fully gone into, and the author makes an especial point of the diet that he considers it most desirable for a patient to follow when suffering from an attack. A notable feature in this little book is an appendix in the form of a bibliography, enabling the reader, if he so desires, to study all the best works upon the subject. The author of the book, Mr. Hollopeter, is Clinical Professor of Pediatrics in the Medico-Chirurgical College of Philadelphia, and is a Fellow of the American Academy of Medicine.



# SANITARY AND METEOROLOGICAL NOTES.

Compiled by SIR JOHN MOORE, B.A., M.D. Univ. Dubl.,

F.R.C.P.I. : F.R. Met. Soc. :

Diplomate in State Medicine and Ex-Sch. Trin. Coll. Dubl.

## VITAL STATISTICS.

*For four weeks ending Saturday, May 23, 1903.*

## IRELAND.

### TWENTY-TWO TOWN DISTRICTS.

THE average annual death-rate represented by the deaths—exclusive of deaths of persons admitted into public institutions from without the respective districts—registered in the week ending May 23, 1903, in the Dublin Registration Area and the twenty-one principal provincial Urban Districts of Ireland was 22·4 per 1,000 of their aggregate population, which, for the purposes of these returns, is estimated at 1,093,289. The deaths registered in each of the four weeks ended Saturday, May 23, and during the whole of that period, in the several districts, alphabetically arranged, corresponded to the following annual rates per 1,000 :—

| Towns, &c.         | Week ending |       |        |        | Average Rate for 4 weeks | Towns, &c.  | Week ending |       |        |        | Average Rate for 4 weeks |
|--------------------|-------------|-------|--------|--------|--------------------------|-------------|-------------|-------|--------|--------|--------------------------|
|                    | May 2       | May 9 | May 16 | May 23 |                          |             | May 2       | May 9 | May 16 | May 23 |                          |
| 22 Town Districts  | 23·3        | 22·6  | 19·7   | 22·4   | 22·0                     | Lisburn     | 13·6        | 27·3  | 36·4   | 27·3   | 26·2                     |
| Armagh             | 27·5        | 0·0   | 13·7   | 6·9    | 12·0                     | Londonderry | 29·0        | 23·9  | 17·6   | 22·7   | 23·3                     |
| Ballymena          | 19·2        | 23·9  | 19·2   | 0·0    | 15·6                     | Lurgan      | 31·0        | 17·7  | 8·9    | 4·4    | 15·5                     |
| Belfast            | 21·4        | 22·5  | 18·5   | 23·8   | 21·6                     | Newry       | 25·2        | 25·2  | 29·4   | 8·4    | 22·1                     |
| Clonmel            | 25·6        | 25·6  | 10·3   | 25·6   | 21·8                     | Newtownards | 28·6        | 34·3  | 11·4   | 17·2   | 22·9                     |
| Cork               | 19·2        | 22·6  | 14·4   | 21·2   | 19·4                     | Portadown   | 10·3        | 15·5  | 10·3   | 5·2    | 10·3                     |
| Drogheda           | 36·8        | 8·2   | 12·3   | 24·5   | 20·5                     | Queenstown  | 6·6         | 0·0   | 26·4   | 33·0   | 16·5                     |
| Dublin (Reg. Area) | 25·7        | 25·3  | 22·3   | 22·4   | 23·9                     | Sligo       | 48·0        | 19·2  | 0·0    | 52·8   | 30·0                     |
| Dundalk            | 4·0         | 16·0  | 51·8   | 19·9   | 22·9                     | Tralee      | 10·6        | 0·0   | 0·0    | 21·1   | 7·9                      |
| Galway             | 11·7        | 11·7  | 42·7   | 23·3   | 22·4                     | Waterford   | 17·5        | 19·5  | 25·3   | 11·7   | 18·5                     |
| Kilkenny           | 49·1        | 24·6  | 9·8    | 59·0   | 35·6                     | Wexford     | 18·7        | 18·7  | 28·0   | 18·7   | 21·0                     |
| Limerick           | 26·0        | 20·5  | 10·9   | 20·5   | 19·5                     |             |             |       |        |        |                          |

The deaths (excluding those of persons admitted into public institutions from without the respective districts) from certain epidemic diseases, registered in the 22 districts during the week ended Saturday, May 23, were equal to an annual rate of 1.0 per 1,000, the rates varying from 0.0 in eighteen of the districts to 10.3 in Clonmel—the 5 deaths from all causes registered in that district including one from diphtheria and one from diarrhoea. Among the 164 deaths from all causes registered in Belfast are one from measles, one from diphtheria, 4 from enteric fever, and 2 from diarrhoea.

### DUBLIN REGISTRATION AREA.

The Dublin Registration Area now consists of the City of Dublin as extended by the Dublin Corporation Act, 1900, together with the Urban Districts of Rathmines, Pembroke, Blackrock, and Kingstown. The population of this area is 378,994; that of the City being 293,385, Rathmines 33,203, Pembroke 26,025, Blackrock 8,759, and Kingstown 17,622.

In the Dublin Registration Area the births registered during the week ended Saturday, May 23, amounted to 220—104 boys and 116 girls; and the deaths to 173—88 males and 85 females.

### DEATHS.

The deaths registered represent an annual rate of mortality of 23.8 in every 1,000 of the population. Omitting the deaths (numbering 10) of persons admitted into public institutions from localities outside the Area, the rate was 22.4 per 1,000. During the twenty weeks ending with Saturday, May 23, the death-rate averaged 27.0, and was 2.3 below the mean rate for the corresponding portions of the ten years 1893–1902.

As in the week preceding, 4 deaths from small-pox were registered, making a total fatality of 21 from the disease for the 11 weeks ended Saturday, May 23. All the deaths were of females, aged respectively 9, 28, 32, and 46 years. In 2 of the fatal cases there was no sign of primary vaccination. One patient, aged 9 years, had never been vaccinated; the fourth patient, aged 32 years, was stated to have one very faint primary mark. Measles, scarlet fever, influenza, and whooping-cough each caused one death; 2 deaths were caused by enteric fever and 2 by *diarrhoea*. The deaths from enteric fever in the 4 preceding weeks numbered, respectively, one, 2, 3, and one.

Tuberculous disease caused 34 deaths—viz., 4 from tuberculous

phthisis, 20 from *phthisis*, 6 from tuberculous meningitis, 2 from tuberculous peritonitis, and 2 from other forms of the disease.

Two deaths were due to carcinoma, one to sarcoma, and 3 to *malignant disease*, ("cancer").

Diseases of the nervous system caused 13 deaths, including 6 deaths of children, all under 5 years of age, from *convulsions*.

There were 26 deaths from diseases of the heart and blood-vessels.

Diseases of the respiratory system caused 36 deaths, which number equals an annual rate of 5 per 1,000 of the population of the Dublin Registration Area. The annual average rate for the corresponding period of the past 10 years was 4 per 1,000. There were 20 deaths from bronchitis, one death from croupous pneumonia, 3 deaths from broncho-pneumonia, and 7 deaths from *pneumonia* included in the total.

Five deaths were registered as due to accidental violence, and there was one death from homicide and one from suicide.

In 7 instances the cause of death was "uncertified," there having been no medical attendant during the last illness. These cases include the deaths of 5 children under 5 years of age (including 4 infants under one year old) and the death of one person aged 81 years.

Forty-four of the persons whose deaths were registered during the week ended May 23 were under 5 years of age (27 being infants under one year, of whom 14 were under one month old), and 43 were aged 60 years and upwards, including 17 persons aged 70 and upwards, of whom 8 were octogenarians.

The Registrar-General points out that the names of causes of death printed above in italics should be avoided whenever possible in Medical Certificates of the Cause of Death.

#### STATE OF INFECTIOUS DISEASE IN THE DUBLIN REGISTRATION AREA AND IN BELFAST.

Returns of the number of cases of infectious diseases notified under the "Infectious Diseases (Notification) Act, 1889," as set forth in the following table, have been furnished by Sir Charles A. Cameron, C.B., M.D., Medical Superintendent Officer of Health for the City of Dublin; Mr. Fawcett, Executive Sanitary Officer for Rathmines and Rathgar Urban District; Mr. Manly, Executive Sanitary Officer for Pembroke Urban District; Mr. Heron, Executive Sanitary Officer for Blackrock Urban District; Dr. Byrne Power, Medical Superintendent Officer of Health for Kingstown Urban District; and Dr. Whitaker, Medical Superintendent Officer of Health for the City of Belfast:—

TABLE SHOWING THE NUMBER OF CASES OF INFECTIOUS DISEASES notified in the Dublin Registration Area (viz.—the City of Dublin and the Urban Districts of Rathmines and Rathgar, Pembroke, Blackrock, and Kingstown), and in the City of Belfast, during the week ended May 23, 1903, and during each of the preceding three weeks.

| CITIES AND URBAN DISTRICTS           | Week ending | Small-pox | Measles | German Measles (Rubella) | Scarlet Fever | Typhus Fever | Relapsing Fever | Diphtheria | Meningitis | Croup | Continued Fever | Typhoid or Enteric Fever | Erysipelas | Puerperal Fever | Varicella | Other Notifiable Diseases | Total |
|--------------------------------------|-------------|-----------|---------|--------------------------|---------------|--------------|-----------------|------------|------------|-------|-----------------|--------------------------|------------|-----------------|-----------|---------------------------|-------|
| City of Dublin                       | May 2       | 23        | 1       | -                        | 40            | -            | -               | 9          | -          | -     | 12              | 12                       | 10         | -               | 12        | 1                         | 106   |
|                                      | May 9       | 26        | 7       | -                        | 31            | 1            | -               | 5          | -          | -     | 12              | 11                       | 17         | 1               | 6         | -                         | 107   |
|                                      | May 16      | 16        | 8       | 12                       | 27            | -            | -               | 10         | -          | -     | 12              | 6                        | 18         | -               | 6         | -                         | 95    |
|                                      | May 23      | 10        | 6       | 1                        | 25            | -            | -               | 5          | -          | -     | 1               | 6                        | 17         | -               | 5         | -                         | 78    |
| Rathmines and Rathgar Urban District | May 2       | -         | -       | -                        | 5             | -            | -               | -          | -          | -     | -               | -                        | -          | -               | -         | -                         | 5     |
|                                      | May 9       | -         | -       | -                        | 5             | -            | -               | 1          | -          | -     | -               | -                        | -          | -               | -         | -                         | 7     |
|                                      | May 16      | -         | 12      | -                        | 1             | -            | -               | 12         | -          | -     | -               | -                        | 1          | -               | -         | -                         | 6     |
|                                      | May 23      | 1         | 12      | -                        | 11            | -            | -               | 12         | -          | -     | 1               | 1                        | 3          | -               | 6         | -                         | 27    |
| Pembroke Urban District              | May 2       | -         | 9       | -                        | 8             | -            | -               | -          | -          | -     | -               | -                        | -          | -               | -         | -                         | 17    |
|                                      | May 9       | 1         | 15      | -                        | 1             | 1            | -               | 1          | -          | -     | -               | 1                        | -          | -               | -         | 12                        | 25    |
|                                      | May 16      | 1         | 5       | -                        | -             | -            | -               | -          | -          | -     | -               | -                        | 1          | -               | 1         | -                         | 8     |
|                                      | May 23      | 1         | 5       | -                        | -             | -            | -               | -          | -          | -     | -               | -                        | 1          | -               | 4         | -                         | 11    |
| Blackrock Urban District             | May 2       | -         | -       | -                        | -             | -            | -               | -          | -          | -     | -               | -                        | -          | -               | -         | -                         | -     |
|                                      | May 9       | -         | -       | -                        | 1             | -            | -               | -          | -          | -     | -               | -                        | -          | -               | -         | -                         | 1     |
|                                      | May 16      | -         | -       | -                        | 2             | -            | -               | -          | -          | -     | -               | 1                        | 1          | -               | -         | -                         | 4     |
|                                      | May 23      | -         | -       | -                        | -             | -            | -               | -          | -          | -     | -               | -                        | -          | -               | -         | -                         | -     |
| Kingstown Urban District             | May 2       | -         | -       | -                        | -             | -            | -               | -          | -          | -     | -               | -                        | -          | -               | -         | -                         | -     |
|                                      | May 9       | -         | -       | -                        | -             | -            | -               | -          | -          | -     | -               | -                        | -          | -               | -         | -                         | -     |
|                                      | May 16      | -         | -       | -                        | -             | -            | -               | -          | -          | -     | -               | -                        | -          | -               | -         | -                         | -     |
|                                      | May 23      | -         | -       | -                        | 1             | -            | -               | -          | -          | -     | -               | -                        | -          | -               | 1         | -                         | 2     |
| City of Belfast                      | May 2       | -         | -       | -                        | 4             | -            | -               | 3          | 1          | 14    | 15              | 7                        | -          | -               | -         | -                         | 44    |
|                                      | May 9       | -         | -       | -                        | 6             | -            | -               | 7          | -          | 11    | 17              | 9                        | -          | -               | -         | -                         | 50    |
|                                      | May 16      | -         | -       | -                        | 7             | -            | -               | 3          | -          | 14    | 17              | 4                        | -          | -               | -         | -                         | 45    |
|                                      | May 23      | -         | -       | -                        | 8             | -            | -               | 3          | -          | 12    | 14              | 5                        | 1          | -               | -         | -                         | 43    |

#### CASES OF INFECTIOUS DISEASES UNDER TREATMENT IN DUBLIN HOSPITALS.

During the week ending Saturday, May 23, 1903, 12 cases of small-pox were admitted to hospital, 12 were discharged, there were 4 deaths, and 39 patients remained under treatment at its close. Besides these there were 41 convalescents at Beneavin, Glasnevin, the Convalescent Home of Cork-street Fever Hospital.

Three cases of measles were admitted to hospital, being 6 below the admissions for the preceding week: 22 cases were discharged, there was one death, and 24 cases remained under treatment at the close of the week.

Thirty cases of scarlatina were admitted to hospital, 28 cases were discharged, there was one death, and 189 cases remained under treatment at the close of the week.

Six cases of diphtheria were admitted to hospital, 11 were discharged, and 24 cases remained under treatment at the close of the week.

Four cases of enteric fever were admitted to hospital, 12 cases were discharged, and 22 cases remained under treatment at the close of the week.

In addition to the above-named diseases, 4 cases of pneumonia were admitted to hospital, 5 patients were discharged, there were 3 deaths, and 16 cases remained under treatment at the end of the week.

### ENGLAND AND SCOTLAND.

The mortality in the week ended Saturday, May 23, in 76 large English towns, including London (in which the rate was 14.8), was equal to an average annual death-rate of 15.5 per 1,000 persons living. The average rate for 8 principal towns of Scotland was 17.2 per 1,000, the rate for Glasgow being 18.6, and for Edinburgh 14.6.

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### METEOROLOGY.

*Abstract of Observations made in the City of Dublin, Lat. 53° 20' N., Long. 6° 15' W., for the Month of May, 1903.*

|                                                  |   |   |   |                |
|--------------------------------------------------|---|---|---|----------------|
| Mean Height of Barometer,                        | - | - | - | 29.871 inches. |
| Maximal Height of Barometer (23rd, at 9 a.m.),   |   |   |   | 30.447 ..      |
| Minimal Height of Barometer (4th, at 9 p.m.),    |   |   |   | 29.246 ..      |
| Mean Dry-bulb Temperature,                       | - | - | - | 51.7°.         |
| Mean Wet-bulb Temperature,                       | - | - | - | 48.5°.         |
| Mean Dew-point Temperature,                      | - | - | - | 45.4°.         |
| Mean Elastic Force (Tension) of Aqueous Vapour,  |   |   |   | .303 inch.     |
| Mean Humidity,                                   | - | - | - | 80.2 per cent. |
| Highest Temperature in Shade (on 25th and 28th), | - | - | - | 68.0 ..        |
| Lowest Temperature in Shade (on 17th),           |   |   |   | 40.9°.         |
| Lowest Temperature on Grass (Radiation) (8th),   |   |   |   | 38.6°.         |
| Mean Amount of Cloud,                            | - | - | - | 63.9 per cent. |
| Rainfall (on 17 days),                           | - | - | - | 2.384 inches.  |
| Greatest Daily Rainfall (on 29th),               | - | - | - | .479 inch.     |
| General Directions of Wind,                      | - | - | - | E.N.E. N.E. E. |

*Remarks.*

Two seasons were presented by May, 1903—cold, dull, rainy weather held during the first sixteen days of the month, whereas the second half was fair, bright, dry and summer-like, with the exception of the 29th–30th, when a heavy fall of rain took place. The mean amount of cloud was large—63.9 per cent., yet from the 23rd to the 28th inclusive the sky was almost cloudless. The estimated duration of bright sunshine was 178.5 hours, compared with 178.75 hours in 1902, and 302.25 hours in 1901. The daily mean duration of sunshine was 5.76 hours, compared with 9.75 hours in May, 1901.

In Dublin the arithmetical mean temperature ( $52.9^{\circ}$ ) was slightly above the average ( $52.1^{\circ}$ ). The mean dry-bulb readings at 9 a.m. and 9 p.m. were  $51.7^{\circ}$ . In the thirty-eight years ending with 1902, May was coldest in 1869 (M. T. =  $48.2^{\circ}$ ), and warmest in 1893 (M. T. =  $56.7^{\circ}$ ). In 1902 the M. T. was  $49.9^{\circ}$ .

The mean height of the barometer was 29.871 inches, or 0.118 inch below the corrected average value for May—namely, 29.989 inches. The mercury rose to 30.447 inches at 9 a.m. of the 23rd, and fell to 29.246 inches at 9 p.m. of the 4th. The observed range of atmospheric pressure was, therefore, 1.201 inches.

The mean temperature deduced from daily readings of the dry-bulb thermometer at 9 a.m. and 9 p.m. was  $51.7^{\circ}$ , or  $6.5^{\circ}$  above the value for April, 1903— $45.2^{\circ}$ . Using the formula, *Mean Temp.* = *Min.* + (*Max.* — *Min.*  $\times .47$ ), the value is  $52.5^{\circ}$ , or  $0.8^{\circ}$  above the average mean temperature for May, calculated in the same way, in the thirty years, 1871–1900, inclusive ( $51.7^{\circ}$ ). The arithmetical mean of the maximal and minimal readings was  $52.9^{\circ}$ , compared with a thirty years' average of  $52.1^{\circ}$ . On the 25th, and again on the 28th, the thermometer in the screen rose to  $68.0^{\circ}$ —wind, E. and N.E. respectively; on the 17th the temperature fell to  $40.9^{\circ}$ —wind, E. The minimum on the grass was  $38.6^{\circ}$ , on the 8th.

The rainfall amounted to 2.384 inches, distributed over 17 days. The average rainfall for May in the thirty-five years, 1866–1900, inclusive, was 2.020 inches, and the average number of rainy days was 15. The rainfall and the rainy days were, therefore, both above the average. In 1886 the rainfall in May was very large—5.472 inches on 21 days; in 1869, also, 5.414 inches fell on 19 days. On the other hand, in 1895, only .177 inch was measured on but 3 days. In 1896 the fall was only .190 on 7 days. In 1902, 2.798 inches fell on 22 days.

Solar halos appeared on the 21st, 23rd and 24th. High winds were noted on 5 days, but never attained the force of a gale. Hail fell on the 12th. There was a slight fog on the morning of the 25th. Lightning occurred on the 19th.

During the month the thermometer did not fall below 32° in the screen or on the grass. The mean minimal temperature on the grass was 44.3°, compared with 40.3° in 1902, 41.7° in 1901, 41.6° in 1900, 40.6° in 1899, 42.9° in 1898, 40.9° in 1897, 43.1° in 1896, 41.8° in 1895, and 37.6° in 1894. The maximum reached or exceeded 60° on 14 days, but once fell short of 50° (on the 10th).

The rainfall in Dublin during the five months ended May 31st amounted to 12.560 inches on 95 days, compared with 9.973 inches on 81 days in 1902, 7.724 inches on 67 days in 1901, 9.921 inches on 92 days in 1900, 9.652 inches on 87 days in 1899, 10.568 inches on 84 days in 1898, 10.693 inches on 93 days in 1897, 5.971 inches on 70 days in 1896, 10.410 inches on 68 days in 1895, 12.709 inches on 90 days in 1894, and a thirty-five years' average of 10.140 inches on 80 days.

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At Knockdolian, Greystones, Co. Wicklow, the rainfall was 3.270 inches, distributed over 16 days—.830 inch falling on the 29th, and .595 inch on the 2nd. The total fall since January 1st, 1903, equals 15.655 inches on 79 days, compared with 11.750 inches on 68 days in 1902, 11.205 inches on 65 days in 1901, 16.381 inches on 84 days in 1900, 15.475 inches on 86 days in 1899, 12.445 inches on 78 days in 1898, 14.120 inches on 90 days in 1897, 5.716 inches on 52 days in 1896, 12.845 inches on 58 days in 1895, and 15.696 inches on 85 days in 1894.

Dr. Arthur S. Goff returns the rainfall at Lynton, Dundrum, Co. Dublin, as 2.86 inches on 18 days, compared with 3.26 inches on 22 days in 1902, and 1.09 inches on 10 days in 1901. The greatest daily measurement was .57 inch on the 2nd. The temperature in the shade ranged from 68° on the 18th, 21st, 22nd and 24th to 40° on the 19th. The mean temperature of the month was 53.1°, compared with 50.5° in 1902, and 52.6° in 1901.

The rainfall at Cloneevin, Killiney, was 2.54 inches on 15 days, compared with 2.58 inches on 21 days in 1902, and 1.20 inches on 10 days in 1901. The maximum was .71 inch on the 29th. The average rainfall in May at this station during the 18 years, 1885-1902, inclusive, was 2.062 inches on 13.6 days. Since January 1st, 1903, 12.21 inches of rain have fallen at Cloneevin on 91 days.

Dr. B. H. Steede, M.D., D.P.H., reports that at the National Hospital for Consumption, Newcastle, Co. Wicklow, the rainfall for the month was 2.762 inches on 19 days, .550 inch being registered on the 2nd, and .529 inch on the 29th. Since January 1st, 1903, 17.542 inches of rain have fallen at this station on 96 days. The highest temperature in the shade was  $67.0^{\circ}$  on the 31st, and the lowest was  $39.9^{\circ}$  on the 17th.

At Cork the rainfall was 3.04 inches on 17 days, or 0.86 inch over the average for May. The greatest day's rainfall was 0.92 inch on the 2nd. Up to May 31st, the rainfall of 1903 in Cork amounted to 21.75 inches, or 6.65 inches above the average.

At the Railway Hotel, Recess, Connemara, Co. Galway rain fell on 15 days to the amount of 3.100 inches, the maximal daily measurement being .450 inch on the 13th.

Dr. J. Byrne Power, F.R. Met. Soc., Medical Superintendent Officer of Health, Kingstown, Co. Dublin, reports that the mean temperature at that health resort was  $51.8^{\circ}$ , being  $0.6^{\circ}$  above the average for the month during the previous 5 years. The extremes were—highest,  $67.5^{\circ}$  on the 31st; lowest,  $41.5^{\circ}$  on the 11th and 19th. At Bournemouth the mean was  $54.2^{\circ}$ , the extremes being—highest,  $74^{\circ}$  on the 27th; lowest,  $39^{\circ}$  on the 13th and 19th. The mean daily range of temperature was, at Kingstown,  $11.4^{\circ}$ , and at Bournemouth  $14.6^{\circ}$ . The mean temperature of the sea at Sandycove Bathing Place was  $49.2^{\circ}$ . The rainfall at Kingstown was 2.35 inches on 15 days, being 0.54 inch above the average for 10 years (1873–80 and 1901–2), at Bournemouth it was 2.32 inches on 11 days. The total duration of bright sunshine was 162.4 hours at Kingstown, the greatest diurnal duration being 13.9 hours on the 25th; the total duration at the Ordnance Survey Office, Phoenix Park, was 158.7 hours, at Valentia 188.4 hours, at Parsonstown 179.8 hours, at Southport 173.1 hours, and at Eastbourne 275.5 hours.



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**T**HIS unique beverage has the pleasant acidity of the Lime Fruit, and that proper measure of sweetness which make certain fruits so refreshing to the system. It is particularly recommended to those suffering from Gout or Rheumatism.

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**T**HIS beverage is made from an extract of the Kola Nut that grows in South Africa, the use of which enables the natives to undergo the utmost fatigue without any other food for long periods. As a nerve tonic our preparation cannot be excelled, particularly when the system is reduced by over indulgence in alcohol.

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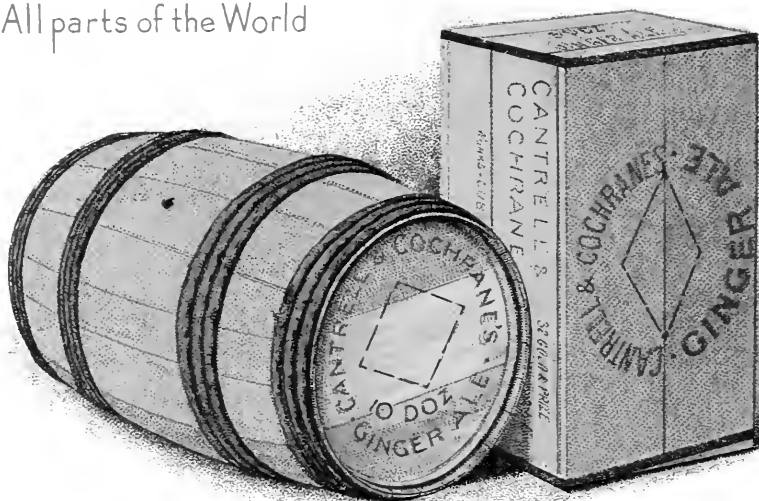
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## PERISCOPE.

### SECONDARY ERUPTIONS IN SMALL-POX.

IN "The Journal of Cutaneous Diseases," May, 1903, an interesting paper on this subject appeared. The author, Dr. Jay F. Schamberg, Professor of Dermatology and Infectious Eruptive Diseases in the Philadelphia Polyclinic and College for Graduates in Medicine, had the opportunity of studying the skin manifestations in about 2,300 cases of small-pox treated in the Municipal Hospital for Contagious and Infectious Diseases, Philadelphia, during the epidemic of 1901-1903. Passing by the various prodromal variolous rashes which have been already thoroughly described, Dr. Schamberg draws attention, in the first instance, to the development upon the skin during the period of desiccation and incrustation of sparsely distributed blebs, containing a thin, dirty, yellow fluid. These blebs may either spring up on previously healthy inter-pustular areas of skin, or result from a direct conversion of the pustules into blebs in different ways which the author describes. The various forms of this pustulo-bleb formation are so common in small-pox that this complication might appropriately be termed *Impetigo variolosa*. Hebra, in 1867, applied the name *Rupia variolosa* to an analogous condition characterised by "central crusts with small vesicular rings, containing a puriform fluid." *Cutaneous gangrene* occasionally occurs during the course of small-pox. It is commonly preceded by an extensive impetigo-variolosa, which increases the liability to the deeper pyogenic infections, such as boils, abscesses, erysipelas and gangrene of the skin. Antiseptic baths, consisting of a 1-10,000 to 1-20,000 solution of corrosive sublimate or of a 1-500 solution of creolin, have a most beneficial action in drying up the impetigo sores and in lessening the tendency to deeper infection. Another secondary eruption in small-pox is the toxic or septic rash which appears in a certain percentage of cases during the stage of decrustation. Between the 6th and the 20th days, and most commonly on the 13th or 14th, a peculiar erythematous efflorescence (*scarlatini-form erythema*), consisting of a diffuse, dusky, punctuated redness, develops on the trunk, extremities, and, at times, the face. This rash lasts for two or three days and then fades away, being often followed by profuse desquamation, occasionally by repeated

exfoliation of the epidermis (*dermatitis exfoliativa variolosa*). In rare instances these secondary rashes may become hæmorrhagic. Dr. Schamberg describes a fatal case of such a purpuric rash in an unvaccinated boy, aged  $7\frac{1}{2}$  years. In another boy, a severe variolous impetigo developed, and this was followed, on the 14th day of the small-pox eruption, by an intense *maculo-papular rash*, which, on the trunk, could not be distinguished from measles. On the face, however, there was but little eruption, the rash was brief in duration, and catarrhal symptoms were absent. Dr. Schamberg concludes that the post-variolous rashes are in all probability *septic* or *toxic* in character, and due, doubtless, to the absorption of some poison into the blood. His paper is well illustrated by eight photographs.

## NEW PREPARATIONS AND SCIENTIFIC INVENTIONS.

### *Isarol.*

THE Society of Chemical Industry at Basle has placed on the market this new pharmaceutical preparation—the “Ammonium Sulphoichthyolicum” of the Swiss Pharmacopœia. Professor F. Egger, Deputy Director of the Universitäts-Poliklinik, Basle, reports that this preparation, formerly known by the name “Ichthyodin mistum,” is a product similar to ichthyol, but exhibiting a more constant composition and greater purity. “Isarol” is a dark brown, viscous fluid of aromatic odour, perfectly soluble in water, partly in alcohol, ether and glycerine, and is easily miscible with fats for producing absorbent ointments. The efficacy of “isarol” was thoroughly tested in the City Policlinic at Basle, where over 200 patients suffering from a variety of diseases were treated with it during 1899, giving most favourable results. This preparation may be used (a) as a vaso-constrictor and antiphlogistic in phlegmons, whitlows, periostitis, tendovaginitis, and rheumatic affections, prescribed as a paste without any addition; (b) as an absorbent, prescribed for burns, eczema, ulcer cruris as a ten per cent. ointment with lanolin; (c) as an antizymotic, prescribed in erysipelas as a ten per cent. isarol-collodion. The sole agents for Great Britain and Ireland are Messrs. Rebman, Limited, 129 Shaftesbury-avenue, Cambridge Circus, London, W.C.

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## In Memoriam.

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CAPTAIN JOSEPH M'ARDLE, R.A.M.C.

M.B., B.CH., B.A.O. R.U.I.

It is with deep regret we have to record the death of a promising and brilliant young Irishman, CAPTAIN M'ARDLE, of the Egyptian Army Medical Service. Captain M'Arde, who was brother of Surgeon M'Arde, was on the threshold of what promised to be a very distinguished career. He was a man of many gifts: yet modest, gentle, and unassuming withal. As a student he signalled himself in many ways; and wound up by winning the Gold Medal for Surgery at St. Vincent's Hospital, thus following worthily in the footsteps of his brother.

Passing into the Army Medical Service, he had a varied and honourable career. He served in Crete on the eve of its liberation, and interviewed the famous, but fallen, Egyptian Leader, Arabi Pasha, who in recognition of his kindness and sympathy presented him with his sword. At Omdurman he saw the Conquest of the Soudan completed by the iron grip and tenacity of Lord Kitchener. Thenceforth he was attached to the Egyptian Army, and devoted himself with assiduity and zeal to the duties of his Profession. He possessed surgical ability and skill in a high degree—on one occasion stitching successfully a wound in the heart-wall.

He was much interested in the languages, customs and antiquities of the wonderland of the Nile; yet never forgot the land of his birth and of his love. He was a constant and diligent student of Gaelic language and literature even when abroad, and during home leave pursued his studies amongst the glens of Connemara and Donegal.

No more graceful or fitting tribute could be paid to his character than that conveyed by the Sirdar, Sir Reginald Wingate, in a gracious letter to the grieved and widowed mother of Captain M'Arde. "It was," he writes, "a great shock and a great sorrow to me to receive the enclosed telegram. I know that on such occasions words of sympathy are of little avail; but I wished to send these few lines to tell you what a high opinion I formed of your son during the period he has been under my command. Both professionally and socially he was one of our most valuable officers, and had he been spared I do not doubt he would have had a brilliant career. We shall miss him dreadfully. He is a

very severe loss, not only to the Egyptian Army, in which he did excellent work, but also to the British Service. I beg you will accept my sincere sympathy in this great and sudden blow which has fallen upon you. I saw your poor son in Khartoum only a few weeks ago, and he appeared then to be in excellent health. I fear his illness must have come on very suddenly, but have no details whatever."

Such a man is a loss to his people and to his country, not readily replaced. In the hearts of his own there is a void which can never be filled. He has left a memory of manliness and worth, the recollection of which will not easily die.

Peace to his ashes! He rests secure "awaiting the Resurrection"—as our Annalists say—in the city ennobled by the sufferings and death of the heroic Gordon.

M. F. Cox.

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#### NOTES ON A CASE OF ACCESSORY PANCREAS.

DR. ALBERT G. NICHOLLS, of McGill University, reports a case of this rare abnormality. It was found in the body of a boy who died of tuberculous disease of the spine. "Just at the point where the duodenum pierced the peritoneal covering to form the jejunum was a small flat nodule. This was situated on the left lateral border of the gut on the same side as the pancreas. The nodule was roughly oval in shape, measuring 1.5 c.m., long by 1 c.m. across, and elevated about 5 c.m. above the general level of the serosa. Its margin gradually sloped on all sides, so that the nodule was of the shape of a flattened dome. The serous covering invested it closely, and it had no connection in any way with the main pancreas, which was in its normal site and of normal appearance." Microscopically the nodule consisted of pancreatic tissue, which lay partly in the submucous coat, but invaded also the muscular and subserous layers. No duct could be found, probably owing to its small size, but the microscopic examination made it evident that a duct existed, and that the glandular tissue was active and functional. The explanation of this anomaly is readily given from a consideration of the embryological development of the pancreas.—*Montreal Medical Journal*, Dec., 1900.



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